Nevada Department of Health and Human Services
Director's Office

# HEALTH INFORMATION TECHNOLOGY BLUE RIBBON TASK FORCE

## AGENDA

August 20, 2010
9:00 a.m.

## MEETING LOCATIONS:

### Videoconference From:

Grant Sawyer State Office Building
555 East Washington Avenue, Room 4401
Las Vegas, NV  89101-1072

### Videoconference To:

Legislative Building
401 South Carson Street, Room 2134
Carson City, NV  89701-4747

Task Force members attend at either location.  If you cannot attend the meeting, you can listen to it live over the Internet, via the Legislative Web site:  http://www.leg.state.nv.us  and click on the link "Live Meetings".  Video and audio broadcasts are available.

*AGENDA ITEMS MAY BE TAKEN OUT OF ORDER AT THE CHAIRMAN'S DISCRETION*

**- THE CHAIRMAN MAY CALL FOR BREAKS AND/OR LUNCH AT HIS DISCRETION -**

*1.  Roll Call, Announcements and Approval of Minutes from the July 16, 2010 Meeting

2.  Staff Reports:
    – Chuck Duarte, State Medicaid Director
    – Lynn O'Mara, State HIT Coordinator

3.  Informational Presentation: Results of the Nevada E-Health Survey/Environmental Scan and Landscape Assessment – Lynn O'Mara, State HIT Coordinator and Mel Rosenberg, Chief of IT, Division of Health Care Financing and Policy

4.  Informational Presentation: Results of the Nevada Health Information Technology Regulatory and Policy Inventory – Lynn O'Mara, State HIT Coordinator

*5. Discussion and Make Recommendations Relating to Health Information Technology Bill Draft Request for 76th Session (2011) of the Nevada Legislature – Lynn O'Mara, State HIT Coordinator

*6. Discussion and Make Recommendations Relating to Draft Nevada Health Information Technology Strategic and Operational Plan required by Nevada's ARRA HITECH State HIE Cooperative Agreement – Lynn O'Mara, State HIT Coordinator

7.  **Public Comment and Discussion

8.  Adjournment

## (*) DENOTES ITEMS ON WHICH THE TASK FORCE MAY TAKE ACTION

PLEASE NOTE: If an action item is not completed within the timeframe allotted, that action may be continued at a future time designated and announced at this meeting by the Chairman.

(**) **Under the Public Comment agenda item, members of the general public may bring matters not appearing on this agenda to the attention of the Task Force. The Task Force may discuss the matters, although it may not act on the matters during this meeting. If the Task Force desires, the matters may be placed on a future agenda for action. In consideration of others, who may also wish to provide public comment, please avoid repetition and limit your comments to no more than three (3) minutes.**

## AGENDA POSTING LOCATIONS

DEPARTMENT OF HEALTH AND HUMAN SERVICES – 4126 Technology Way, First Floor Lobby, Carson City

GRANT SAWYER STATE OFFICE BUILDING – 555 East Washington Avenue, First Floor Lobby, Las Vegas

LEGISLATIVE BUILDING – 401 South Carson Street, First Floor Lobby, Carson City

NEVADA STATE LIBRARY AND ARCHIVES – 100 Stewart Street, Carson City

On the Internet at the Department of Health and Human Services website:
http://dhhs.nv.gov/HIT.htm

We are pleased to make reasonable accommodations for members of the public who are disabled and wish to attend the meeting. If special arrangements are necessary, please notify Joyce Miller, in writing at the Nevada Department of Health and Human Services, 4126 Technology Way, Suite 100, Carson City, NV 89706 or by calling 775.684.4000 no later than August 18, 2010.

# HEALTH INFORMATION TECHNOLOGY BLUE RIBBON TASK FORCE
# DRAFT MEETING MINUTES

**July 16, 2010**
**9:00 am**

**Legislative Building**
**401 South Carson Street, Room 2134**
**Carson City, NV 89701-4747**

**Grant Sawyer State Office Building**
**555 East Washington Avenue, Room 4401**
**Las Vegas, NV 89101-1072**

**TASK FORCE MEMBERS PRESENT:**

Dr. Raymond Rawson, Chairman (Las Vegas)
Brett Barratt (Carson City)
Chris Bosse (Las Vegas)
Peggy Brown (Carson City)
Tom Chase (Carson City)
Charles "Chuck" Duarte (Carson City)
Robert "Bob" Schaich (Las Vegas)
Glenn Trowbridge (Las Vegas)

**TASK FORCE MEMBERS EXCUSED:**

Marc Bennett, Vice Chairman
Bobbette Bond
Brian Brannman
Robert "Rob" Dornberger
Tracey Green MD
Rick Hsu
Stephen Loos, MD
Valerie Rosalin, RN
Joanne Ruh
Russell Suzuki
Maurizio Trevisan, MD
Marena Works, RN

**DEPARTMENT OF HEALTH AND HUMAN SERVICES (DHHS) STAFF PRESENT:**
Lynn O'Mara, State HIT Coordinator, Director's Office, DHHS
Ernie Hernandez, IT Manager, Office of Informatics and Technology, Health Division
Gabriel Lither, Senior Deputy Attorney General, Office of the Attorney General
Mary Liveratti, Deputy Director, DHHS
Justin Luna, Management Analyst, Division of Health Care Financing and Policy
Joyce Miller, Administrative Assistant, Director's Office, DHHS
Theresa Presley, IT Professional, Office of Informatics and Technology, Health Division
Cynthia Pyzel, Senior Deputy Attorney General, Office of the Attorney General
Mel Rosenberg, Chief of IT, Division of Health Care Financing and Policy

**OTHERS PRESENT:**
Cliff King, Chief Insurance Examiner, Life and Health, Nevada Division of Insurance
Dustin Boothe, Epidemiologist, Carson City Health and Human Services
David Brown, Emerging Technology Specialist, AT&T
Alaina Cowley, S & W, LLC
Deborah Huber, Vice-President, Nevada Programs, HealthInsight
Alex Tunchek, representing Neena Laxalt
Leonard Hammer, Physician's Managed Care IPA
Michael Pennington, CSA/DC
Nichole McNeal, Public Knowledge
Dr. Marcia Turner, NSHE
Garth Winckler, WorldDoc, Inc.

Dr. Raymond Rawson, Chairman, called the meeting to order at 9:07 a.m. He stated that the meeting agenda was posted in accordance with Nevada Open Meeting Law at the Nevada Department of Health and Human Services, the Grant Sawyer State Office Building, the Legislative Building, the Nevada State Library and Archives, and on the Nevada Department of Health and Human Services web site. He also explained that the meeting was being videoconferenced from the Grant Sawyer Building in Las Vegas to the Legislative Building in Carson City, as well as being broadcast live over the Internet.

Dr. Rawson stated that public comment would be taken later during the meeting. He reminded everyone that when speaking to state their name and who they represented, for the record. Also, he commented that as the Chairman, he reserved the right to limit comments to three (3) minutes per person, and would respectfully interrupt if the time was exceeded. He asked that information already presented by someone else not be repeated. Dr. Rawson asked that information already presented by someone else not be repeated. He reminded the Task Force members whenever speaking, to always first identify themselves for the record, as it was important to correctly identify speakers and their corresponding comments. He requested that everyone in Carson City and Las Vegas please sign the attendance sheet for their location, if they had not already done so.

Dr. Rawson announced that Governor Gibbons recently appointed Brett Barratt, Nevada's new Insurance Commissioner, to the Task Force. He noted that Commissioner Barratt has been with the Division of Insurance since 2005, earned his law degree from Michigan State University College of Law, and his appointment fills the opening left by Scott Kipper's resignation from the Task Force. Dr. Rawson welcomed Department of Health and Human Services Deputy Director, Mary Liveratti, who was attending the meeting in Carson City. He explained that she was representing Director Mike Willden and was familiar with the work of the Task Force.

Dr. Rawson requested that Joyce Miller call the roll.

## 1. Roll Call, Announcements and Approval of Meeting Minutes from the June 11, 2010 Meeting

Joyce Miller called the roll. She informed the Chairman that Marc Bennett was excused and was being represented by Deborah Huber, Vice President of HealthInsight. Bobbette Bond, Brian Brannman and JoAnne Rue were excused. Marena Works was excused and was being represented by Dustin Boothe, Epidemiologist for Carson City Health and Human Services. Dr. Maurizio Trevisan was excused and was being represented by Dr. Marcia Turner, Vice Chancellor of Operations, Nevada System of Higher Education. Rick Hsu, Robert Dornberger, Valerie Rosalin, Russell Suzuki and Dr. Stephen Loos were also excused. Dr. Tracey Green was excused and was being represented by Ernie Hernandez, Manager of the Health Division Office of Informatics and Technology.

Dr. Rawson encouraged participation by the individuals representing Task Force members, and noted that they had the authority to vote.

Dr. Rawson asked if there were any additions or corrections to the minutes from the June 11, 2010 Task Force Meeting. There was none. He then asked for a motion to approve the minutes.

**MOTION: Robert Schaich moved to approve the minutes from the June 11, 2010 meeting
SECOND: Charles Duarte
APPROVED: UNANIMOUSLY**

Dr. Rawson asked if there was any public comment regarding the minutes. There was none.

## 2. Informational Item: Preliminary Data of the Nevada E-Health Survey

Ms. O'Mara noted that the Nevada E-Health Survey, being was being done by Public Knowledge, a contracted vendor. Conducted from May 17 through July 6, 2010; the results would produce a statewide assessment of both Electronic Health Record (EHR) adoption and Health Information Exchange (HIE) status. She reminded the Task Force that the survey met the environmental scan requirement for the State HIE Cooperative Agreement and the landscape assessment requirement for the State Medicaid HIT Plan. Ms. O'Mara explained that the statewide assessment would include both quantitative and qualitative data obtained from an online survey, key individual interviews, and stakeholder focus groups.

Mr. Duarte reported that the survey data were statistically reliable, for planning purposes and for the development of the State HIT Strategic Plan and State Medicaid HIT Plan. He provided the Task Force with some preliminary survey findings about EHR adoption:

- Just over 400 online surveys were submitted; 364 were deemed complete and appropriate for inclusion in the survey results.
- Approximately half of the respondents have an EHR system.
- One-third plan on using or implementing an EHR system within the next five years.
- Providers with EHRs use them for an array of clinical functions to support clinical operations.
- Many providers are uncertain about their EHR plans.
- Providers were more interested in the Medicaid as well as the Medicare incentives associated with EHR Meaningful Use requirements.

➢ Greater provider outreach and education is needed regarding statewide HIT, HIE and EHR efforts and initiatives.

Mr. Duarte stated that Nevada Medicaid continued to promote Electronic Health Records, e-prescribing and electronic claims submission through the quarterly Nevada Medicaid Newsletter sent to their providers.

Ms. O'Mara provided the Task Force with some preliminary survey findings regarding HIE:
➢ Approximately half of the survey responders were hesitant to engage in HIE, due to concerns about HIPAA, security, patient privacy, liability issues, etc.
➢ While significant electronic billing and claims processing is being done, along with a fair amount of e-prescribing, lab ordering and lab results being exchanged electronically, HIE on larger scales across disparate organizations does not appear to be rapidly occurring
➢ Stakeholders seemed to have a misunderstanding or misconception of HIE and the necessary requirements.
➢ Chief HIE barriers appear to be privacy, security and legal concerns, lack of access to technical support or expertise, and insufficient information about available options.
➢ About half of providers are in "wait and see" mode for further investments in HIT, HIE, and EHRs, due to confusion on abilities to integrate with state-level infrastructure, cost issues and subscription rates, and uncertain return on investment.
➢ Most responders believe some kind of public-private partnership governance would best fit Nevada, with no one entity having control of the HIE.
➢ Many stakeholders think the State should serve in an overarching regulatory role providing HIE oversight, certification and standards setting.

Ms. O'Mara noted that overall; with the exception of those individuals and stakeholder groups that are involved or working with the HIT Task Force, awareness, understanding and engagement of state-level efforts with both HIE and HIT is very low. This is not surprising given the planning stage of the state level efforts for adoption and implementation of EHR and HIE. She commented that other had similar findings. Ms. O'Mara stated that the statewide HIT assessment final report would be presented during the August 2010 meeting of the Task Force. She concluded that the statewide assessment would need to be done annually, through the life of the state HIE Cooperative Agreement, and would include that as part of the State HIT Strategic Plan and budget.

### 3. Informational Item: Preliminary Results of the State Health Information Technology Regulatory Inventory

Ms. O'Mara stated that a regulatory and policy inventory was required by the State HIE Cooperative Agreement. She reported that a former Legislative Council Bureau, or LCB, health policy analyst had been contracted to conduct the inventory. The results were expected to help identify statutory HIT barriers and gaps to meeting HITECH requirements, which would be presented at the next Task Force meeting. Ms. O'Mara stated that she and Director Willden had met with the head of the LCB Legal Division. Based on the guidance received, she expected the four Bill Draft Requests, or BDRs, submitted with the April 2010 Task Force report to the Governor to be consolidated into one omnibus BDR, as they are interrelated and interdependent. The omnibus BDR will be reviewed by the Task Force during the next meeting.

Ms. O'Mara provided preliminary inventory findings to the Task Force. Provisions may be needed related to the new meaningful use rules and to record residency, accessibility, maintenance and retention. Current NRS provisions already include the definition of electronic care records and address most of the privacy issues brought to the attention of the task Force by the ACLU Nevada. It appears that there are several patient consent opt-in provisions already in the NRS. New provisions may be necessary for the authorizing of HIT and HIE regulatory oversight and the promulgation of regulations. Existing provisions that may require revision are those regarding investigations that include review of an individual's EHR. Ms. O'Mara noted that certain existing pharmacy provisions may unintentionally be a barrier to e-prescribing and may need revision.

Ms. O'Mara commented that it is was not yet clear if enabling language would be necessary for Health Information Exchange. She reported that there was general concern by all of the State HIT Coordinators regarding consistency of state laws in order to facilitate interstate HIE.

### 4. Staff Reports

Mr. Duarte reported on the status of the negotiations in progress with Hewlett-Packard and its EDS subsidiary regarding the intent to award the take-over contract for the Nevada Medicaid Management Information System. He noted that the RFP included a provision for an optional HIE solution and exchange solution for the state of Nevada. Once the terms were agreed upon, the final contract would probably receive approval by

the Board of Examiners in October. MMIS implementation would then begin, followed by the operationalizing of their HIE.

Mr. Duarte stated that the development of the Medicaid EHR Incentive Program was in progress, and that there would be even more HIT and HIE opportunities for integration of EHR systems and services, due to the passage of the Patient Protection and Affordable Care Act. These included the provision of medical services through models, such as; medical home or health home, as well as accountable care organizations and other opportunities for integration of service between hospitals and physicians requiring the use of EHRs. He commented that that the importance of EHR systems and HIE capabilities will probably be magnified as the result of the establishment of Health Insurance Exchanges by 2014.

Dr. Rawson asked about the dollar amount of the MMIS takeover contract. Mr. Duarte replied that the contract authority is approximately $200 million over five years, and based on historical estimates, which could vary depending on Medicaid caseloads. He further explained that the contract amount was also based on the cost trends of the current MMIS contract and noted that there would be some flexibility with respect to caseload growth as it affects fiscal operations.

Ms. O'Mara asked Mr. Duarte if he would like to comment on the Meaningful Use rules issued earlier in the week. Mr. Duarte replied that he believed the chief hurdle would be finding qualified eligible providers for the Medicaid EHR incentive payments, as the survey results indicated that many were below the required minimum Medicaid patient volume. He noted that the situation could significantly change in 2014, when the recently passed health care reform legislation went into effect.

Ms. O'Mara reported that she recently met with and briefed the Interim Associate Dean for Medical Education at the University of Nevada School of Medicine, regarding the HITECH Act and possible impact on medical school curriculum. She noted that it was important when medical students were out working in clinical environments to be familiar with the concepts of electronic health records, meaningful use and health information exchange. Ms. O'Mara stated that the School of Medicine is updating its curriculum for second year medical students and expects to include these topics.

Ms. O'Mara stated that she had met with Frank Woodbeck, the Director of Las Vegas Operations and Statewide Workforce Initiatives for the Nevada Commission on Economic Development, and briefed him about the HITECH Act and potential HIT business and workforce development opportunities. A plan for working together was agreed upon, and she will provide updates to the Task Force.

Ms. O'Mara noted that Nevada's Regional Extension Center, HealthInsight, was experiencing some difficulty in recruiting providers for the REC program. HealthInsight has encountered providers who were confused about the role of the REC, which is to provide EHR support for adopting and using EHR systems, meeting meaningful use requirements, and obtaining Medicaid EHR incentives. The providers' perception is that HealthInsight is in competition with EHR vendors, which is incorrect. She noted that ONC is aware of the issue.

Ms. O'Mara provided an update about ARRA Broadband grants, and explained that pending federal legislation may result in some of those grant funds being redirected to an appropriation for the war in Afghanistan. This could place Nevada applications at risk, and Nevada may need to explore leveraging the existing telemedicine infrastructure for HIE, to support meaningful use requirements. Ms. O'Mara reported that the Nevada State Library and Archives had recently been awarded ARRA Broadband funding for establishing public computing centers in public libraries statewide.

Ms. O'Mara reminded the Task Force that its final report to the Governor is due November 30, 2010. The HIT Strategic Plan will provide most of the required information, and a draft report will be reviewed by the Task Force during its November 2010 meeting.

Ms. O'Mara reported that a Program Information Notice was issued by ONC to all State HIE Cooperative Agreement grantees on July 6, 2010, which significantly altered some of the original mandates of the agreement. The changes are focused on HIE to support meaningful use requirements, and one of the new requirements is a statewide HIE Capacity Gap Analysis, with specific parameters stipulated. It is an expansion of certain sections of the environmental scan, and more guidance is expected from ONC. Taking the new program requirements into consideration, having to extend the Nevada E-Health Survey timeframe in order to obtain a statistically reliable sample, and reviewing the preliminary results of the environmental scan and legal inventory, Nevada will not be able to make all the required decisions for the HIT Strategic Plan for its August 31, 2010 submission. More time is needed to review the information critical to responsible decision making, in order to strike the proper balance between meeting the agreement requirements and the

best interests of Nevada. Ms. O'Mara has discussed the issues with ONC, who acknowledged; "not all states will arrive at the same place at the same time." ONC's expectation is that Nevada's HIT Strategic and Operational Plan will include the path and timeline for meeting the agreement requirements, with updates submitted as often as necessary, in accordance with the agreement terms and conditions.

Ms. O'Mara stated that on June 24, 2010, the Interim Finance Committee approved the carry forward of the balance of the Contingency Fund monies approved last August for state HIT efforts, including the HIT Task Force, the State HIE Cooperative Agreement application, and the HIT Project Manager position. The $165,000 will be used to meet grant match requirements during State Fiscal year 2011, and an additional $36,000 will be needed to fund the balance.

Ms. O'Mara noted that an HIE governance structure similar to the one employed by Maryland may work well for Nevada, and reported that, to date, the research being done by the UNR MBA students had not yet identified a state HIE model that was sustainable. She commented that once the environmental scan final report, regulatory and policy inventory, and research being done by the MBA students was available, the Task Force may wish to revise the deployment of the Subcommittees.

## 5. Discussion and Action on Information Presented during Staff Reports
Dr. Rawson agreed that a review and realignment of the Task Force Subcommittees structures and any future groups may be necessary to achieve effective results.

Ms. O'Mara asked Ms. Brown if AHIMA had released any statements, comments or information which would be helpful to the Task Force regarding Meaningful Use. Ms. Brown replied that she was not aware of any.

Mr. Schaich asked Ms. O'Mara if the HIT Strategic Plan would clarify the desired objectives for the Nevada Health Information Exchange or what the State needs to achieve in terms of a Health Information Exchange. Ms. O'Mara responded that the previously mentioned Program Information Notice provided specific guidance about the objectives expected to be achieved by the State HIE Cooperative Agreement, and those would be addressed in the draft plan. She commented that the notice reiterated the 2011 HIE priorities announced at the HIE Cooperative Agreement Kick-off meeting back in May: E-Prescribing, receipt of structured lab results, and sharing patient care summaries across unaffiliated organizations, all of which were included in the meaningful use requirements. Ms. O'Mara noted that Dr. Loos has stated on the record that he would like to be sure that receipt of structured imaging results is included as a priority. Mr. Schaich stated that the Task Force may need to work toward a consensus of additional components or priorities that would need to be considered. Ms. O'Mara said that the review of the HIT Strategic Plan, would include the mandatory HIE requirements.

Ms. O'Mara noted that, as reported during the June 2010 meeting of the Task Force, Deloitte was now responsible for the State HIE Technical Assistance program. This assistance was available to all State HIE Cooperative Agreement grantees and could also be provided to the Task Force.

Dr. Rawson asked Ms. O'Mara to review the meeting calendar. Ms. O'Mara stated that the next two meetings were scheduled for August 20, 2010 and September 17, 2010, and reminded the Task Force that the meeting schedule was posted on the DHHS HIT Web site.

## 6. Public Comment and Discussion
Dr. Rawson asked for public comment and discussion. There was none.

## 7. Adjournment
Dr. Rawson adjourned the meeting at 10:07 a.m.

# Nevada Health Information Technology (HIT) Statewide Assessment

State of Nevada

Department of Health and Human Services

Office of Health Information Technology
and
Division of Health Care Financing and Policy

August 13, 2010

# Table of Contents

# 1    Executive Summary

## 1.1    Introduction

As part of the American Recovery and Reinvestment Act (ARRA) Health Information Technology for Economic Clinical Health (HITECH) Act of 2009[1] and subsequent rules and regulations, states can request financial resources to support health care transformation through Health Information Technology (HIT) and Health Information Exchange (HIE). There are two primary objectives of HITECH requirements that affect state administration of HIT and HIE:

1. Incentive payments through Medicaid for the implementation/upgrade, adoption, and meaningful use of Electronic Health Records (EHRs).

2. State HIE Cooperative Agreement grants to establish or enhance the infrastructure necessary for the exchange of health information.

Planning for HIT and HIE initiatives in Nevada falls under the umbrella of the Nevada Department of Health and Human Services (DHHS), which includes the State's Medicaid Program and Office of Health Information Technology:

- *Division of Health Care Financing and Policy (DHCFP)* – DHCFP is responsible for the administration of Nevada's Medicaid and SCHIP programs. Through ARRA funding granted by the Centers for Medicare and Medicaid Services (CMS), DHCFP is developing a State Medicaid HIT Plan (SMHP). This HIT Plan will describe the vision and roadmap for how Nevada's Medicaid HIT efforts will work in concert with Nevada's health care system. The SMHP requires that a Landscape Assessment be conducted, which is addressed through this report. In addition, DHCFP must also include the Electronic Health Record (EHR) Incentive Program in the SMHP, which will describe the plan for providing incentive payments to eligible professional providers and hospitals for the implementation/upgrade, adoption, and meaningful use of EHRs.

  > **DHCFP....**
  > – State Medicaid HIT Plan (SMHP), including a *Landscape Assessment*
  > – Provider Incentives for meaningful use of EHRs

- *Office of Health Information Technology (OHIT)* – The Office of Health Information Technology is responsible for administering the ARRA HITECH State HIE Cooperative Agreement, through the Office of the National Coordinator (ONC) for Health

  > **OHIT....**
  > – HIT Strategic and Operational Plan, including an *Environmental Scan*
  > – State HIE Cooperative Agreement

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[1] According to the U.S. Department of Health and Human Services website (http://healthit.hhs.gov), the Health Information Technology for Economic and Clinical Health (HITECH) Act "seeks to improve American health care delivery and patient care through an unprecedented investment in health information technology. The provisions of the HITECH Act are specifically designed to work together to provide the necessary assistance and technical support to providers, enable coordination and alignment within and among states, establish connectivity to the public health community in case of emergencies, and assure the workforce is properly trained and equipped to be meaningful users of EHRs."

Information Technology, to support development of a statewide HIE infrastructure. OHIT is using the Agreement funds to develop the required statewide HIT Strategic and Operational Plan. This plan is required to include an HIT Environmental Scan, which is addressed through this report.

Since the requirements of the Medicaid Landscape Assessment and HIT Environmental Scan were similar, OHIT and DHCFP were permitted by CMS and ONC to pool funding and conduct the assessment as a joint venture. In addition to being cost effective, this joint assessment ensures ongoing coordination and alignment of State HIT efforts. For purposes of this report, "HIT Assessment" is the term used to describe the project.

The Nevada Statewide HIT Assessment provides a baseline status of representative EHR and HIE utilization by Nevada's health care community, identifies barriers and obstacles to EHR adoption and HIE utilization, assesses stakeholder readiness for further adoption, and provides recommendations for overcoming key barriers.

A glossary of terms associated with this report can be found in Appendix A.

## 1.2   Nevada HIT

OHIT is working closely with a wide variety of public and private stakeholders to determine Nevada's strategic HIT and HIE direction. As the Division that oversees Medicaid, DHCFP plays a key role in this partnership. To assist DHHS with statewide HIT initiatives, Governor Jim Gibbons appointed the Nevada HIT Blue Ribbon Task Force to provide oversight and guidance on the planning and adoption of a statewide health information exchange infrastructure. Comprised of key stakeholders and industry leaders, the HIT Blue Ribbon Task Force has been working with DHHS, since October 2009, to develop Nevada's HIT Strategic and Operational Plan. The Task Force members appointed by the Governor represent a diverse group, including representatives from Nevada Medicaid, Nevada's Regional Extension Center (REC), health systems and providers, public health, insurance, payers, the university system, and consumers. More information about the HIT Blue Ribbon Task Force can be found in Section 2.4.

## 1.3   Statement of Needs and Objectives

### Statement of Needs

The HIT Assessment is a first step in the HIT and HIE planning process for OHIT and DHCFP to meet HITECH mandates. The results of this assessment will be incorporated into both OHIT's HIT Strategic and Operational Plan for the State HIE Cooperative Agreement and DHCFP's State Medicaid HIT Plan.

## Statement of Objectives

The HIT Assessment looks broadly at current EHR adoption and HIE utilization by the provider community, planned readiness for future EHR adoption and HIE utilization, and barriers to adoption and use. It has the following objectives:

- Determine a representative level of EHR adoption and HIE utilization for health care providers.

- Assess the eligibility and status of provider readiness for use of EHRs compared to meaningful use criteria.

- Determine pertinent HIE infrastructure already established in Nevada.

- Identify current barriers to EHR and HIE adoption.

- Assess the current HIT and HIE assets that could be expanded or leveraged.

- Assess readiness of providers to participate in statewide HIE.

- Provide recommendations for proceeding with next steps, as relevant to the State's HIT Strategic and Operational Plan and SMHP.

## 1.4    State of HIT within the Nevada Health Care Community

As a result of the assessment activities, it is clear that Nevada's provider community and other health care stakeholders generally support both the concept and value of EHRs and HIE. Providers are interested in understanding, and even adopting, technologies that offer potential benefits such as improved patient-centered care and efficiencies in the delivery and provision of health care.

Levels of EHR adoption and HIE utilization vary greatly across the provider community. Even among providers that have already adopted technology for EHRs, there is generally a lack of robust functions and features used. In addition, little exchange of health information is occurring outside of a provider's or stakeholder's network. Providers face many obstacles to adoption and use, including financial constraints, staff training needs, concerns regarding operational impacts, and uses of existing systems that have traditionally lacked interoperability and require additional enhancements. To meet EHR meaningful use requirements as specified by the CMS Final Rule for the EHR Incentive Program, Nevada health care providers require additional financial resources, technical guidance, and a better understanding of the State's HIT initiatives. The providers also requested more detailed information regarding how their practice or facility will be impacted by the HITECH Act and State HIT efforts, independent of whether or not they currently have an EHR system in place.

The adoption barriers encountered by providers are compounded by a number of other variables that define the environment and context for health care in Nevada. These include the economic

climate, the State budget deficit, an ongoing shortage of health care professionals, and confusion about federal requirements and standards.

## 1.5   Key Findings

Key findings resulting from the assessment are described in this section. The following information gathering tools were used as part of this assessment:

- Survey of providers serving Nevada consumers
- EHR and HIE stakeholder focus groups
- EHR and HIE stakeholder interviews

The findings are grouped into six broad themes. Additional information supporting the high-level findings can be found in Section 4.1.

# Theme 1:  Current Uses of EHR Systems

- Many of the providers reached through the assessment show an interest in increasing adoption, despite the numerous barriers that exist.
- Providers with EHRs report using a broad range of EHR functionalities.

# Theme 2:  Direction for EHR Adoption and HIE Utilization

- The EHR adoption levels vary by provider type with the large hospitals and large physician practices reporting higher levels of EHR adoption compared to other providers.
- There is a lack of exchange of health information occurring in the Nevada health care system, outside of a provider's or stakeholder's network.
- Large hospitals, large networks of providers, and other providers that have consciously advanced their EHR capacity ahead of federal legislation are the primary providers who have some level of readiness and capacity to participate in an HIE.

# Theme 3: Meaningful Use and Incentive Payments

- Many providers are still unsure about whether or not they will apply for the incentive payments.
- Providers will have difficulty meeting the proposed meaningful use criteria in a timely manner.

# Theme 4:  Barriers to Advancing EHR Adoption and HIE Utilization

- The most significant barrier to implementing, adopting and enhancing EHRs is cost.

- Providers are overwhelmed by the number of options for EHRs and the effort required to implement or enhance systems within the timelines established at the federal level.

- Providers are hesitant to engage in HIE due to patient privacy and security concerns.

- Most stakeholders know little about HIE, including technical infrastructure and recognized standards.

- Many providers are in "wait and see" mode for further investments in EHR and HIE due to uncertainty around the details of costs for participation in HIE and integration with a statewide infrastructure.

- Nevada will be competing with other states for a finite nationwide pool of qualified HIT professionals, until a stable and sustainable statewide labor pool can be established.

## Theme 5: Stakeholder Awareness and Engagement

- With the exception of those individuals and stakeholder groups that are involved in the HIT Blue Ribbon Task Force, awareness, understanding and engagement of State level efforts with both HIT and HIE is very low.

- Providers show some interest in getting involved in HIE-related planning activities.

- Provider awareness of the value of EHR adoption as a means of streamlining business processes and creating more efficient health care practices may be confounded by a perceived emphasis on rules and regulations.

## Theme 6: HIE Governance

- Despite the variance of adoption by provider types, there is some consistency in thinking around HIE models, HIE governance, and the role of the State.

## 1.6    Assumptions and Constraints

Below are identified assumptions and constraints that are relevant to this project:

- This project is a statewide assessment, which generally gauges the adoption of EHR and HIE for Nevada *health care providers and payers*.

- The assessment does not represent provider EHR and HIE readiness by individual provider groups or individual providers.

- Conclusions have been drawn about general EHR and HIE provider readiness based on the information gleaned through the assessment, including input from providers, payers and other key stakeholders. Not all Nevada providers and payers participated in this assessment.

# 2 Nevada State Level HIT and HIE Planning

## 2.1 Overview

HIT and HIE initiatives are being planned and managed within Nevada DHHS, as a shared responsibility of the Office of Health Information Technology (OHIT) and the Division of Health Care Financing and Policy (DHCFP). Additionally, stakeholders engaged in the HIT Blue Ribbon Task Force are participating in various aspects of HIT and HIE planning. These efforts are described in the following subsections.

## 2.2 Office of Health Information Technology for Nevada

OHIT is responsible for coordinating statewide HIT efforts and initiatives. This includes administering and managing the ARRA HITECH State Health Information Exchange Cooperative Agreement, facilitating the core infrastructure and capacity that will enable intra-state, interstate and nationwide HIE. Its vision for achieving those objectives includes:

- Fostering an environment that encourages adoption and use of HIT by the health care community.

- Supporting health information access and exchange 24 hours a day, seven days a week.

- Improving care coordination and quality through enhanced clinical decision support.

- Reducing medical errors and improving patient safety.

- Reducing costs by eliminating unnecessary or duplicative procedures.

- Enhancing statewide public health and epidemiological surveillance capabilities for improving population health and real-time identification and mitigation of disease outbreaks and emergency health situations.

- Supporting emerging health care needs by creating an environment that fosters innovation.

- Supporting the role of consumers and providers in improving health outcomes and managing costs.

- Maintaining the privacy and security of Nevadans' personal health information.

## 2.3 DHCFP and Medicaid Engagement in State level Efforts

DHCFP administers the Medicaid and SCHIP programs under Nevada DHHS, and is collaborating on statewide HIT and HIE planning efforts with OHIT. DHCFP's HIT Project Staff are responsible for:

- Participating in statewide initiatives and workgroups.

- Coordinating with Medicaid stakeholders.

- Overseeing any contracted work associated with the SMHP planning tasks.

- Planning for and administering the EHR Incentive Program for Medicaid providers.

- Establishing appropriate communication and outreach strategies with Medicaid providers.

A key strategic deliverable being developed by DHCFP is the SMHP, which includes the Medicaid "As-Is" HIT environment, the "To-Be" HIT vision, the roadmap with plans on how to achieve the future vision, and the approach for facilitating incentive payments to eligible professionals and hospitals. This HIT Assessment will serve as the "As-Is" state of HIT for Medicaid, providing a baseline for moving from the current environment to the "To-Be" HIT vision.

In addition, DHCFP requested a scalable HIE solution as part of the procurement for the Medicaid Management Information System (MMIS) Takeover (RFP No. 1824). Depending on the HIE solution to be provided by the awarded vendor, DHHS may integrate this solution as part of the HIE infrastructure for the State. More information regarding the solution will be provided to stakeholders once a contract is in place with the awarded vendor; such information is expected to be available by the fall of 2010.

## 2.4    HIE Cooperative Agreement and HIT Blue Ribbon Task Force

### Overview of HIT Blue Ribbon Task Force and Stakeholder Engagement

In September 2009, Governor Jim Gibbons issued an Executive Order establishing the Nevada HIT Blue Ribbon Task Force, and appointed a diverse group of 20 key stakeholders and industry leaders, including representatives from Nevada Medicaid, Nevada's HIT Regional Extension Center, health systems and providers, public health, insurance, payers, the university system, and consumers. Members appointed to the HIT Blue Ribbon Task Force can be found in Appendix D. The mission of the Task Force is to provide oversight and guidance to DHHS regarding HIT and HIE activities and to provide input to DHHS for developing the statewide HIE infrastructure and the HIT Strategic and Operational Plan.

Task Force meetings are conducted in accordance with Nevada Open Meeting Law and always held at one location in Northern Nevada and one location in Southern Nevada, connected via videoconferencing. As often as possible, the meetings are also broadcast live over the Internet. DHHS maintains the Nevada HIT Web site: http://dhhs.nv.gov/HIT.htm, and the Task Force Agendas and Meeting Schedule are available at: http://dhhs.nv.gov/Hit_TaskForce.htm.

The Nevada HIT Blue Ribbon Task Force is charged with:

- Recommending policy and legislative actions.

- Encouraging coordinated and collaborative efforts with the private health care sector.

- Maximizing public and private partnerships for the development of a sustainable statewide

health information infrastructure.

- Providing a transparent forum for reviewing and discussing HIT and HIE issues, and suggesting potential solutions.

## HIT Blue Ribbon Task Force Structure

The HIT Blue Ribbon Task Force was organized into subcommittees to facilitate planning and decision making. The subcommittees are: HIE Technical Infrastructure, HIE Governance and Accountability, HIE Financial Viability and Sustainability, EHR Adoption and Meaningful Use, and HIE Privacy, Security and Patient Consent. The subcommittees include the core members of the Task Force as well as other stakeholders.

The DHHS Director and the State HIT Coordinator are staff to the Task Force and also serve in an advisory capacity. Nevada's Medicaid Director is a member of the HIT Blue Ribbon Task Force and two DHCFP HIT Project Staff serve on Task Force Subcommittees. This ensures ongoing HIT coordination at multiple levels within the State.

## Current Status of HIT Blue Ribbon Task Force Activities

Since October 2009, the Task Force has been meeting almost monthly to discuss issues related to the State HIE Cooperative Agreement and the development of the related State HIT Strategic and Operational Plans. Issues being discussed include an operationally and financially sustainable HIE technical infrastructure that leverages current assets and investments, an effective governance structure that complies with all state and federal laws, HIE and EHR barriers, privacy and security concerns, patient consent options, meeting cooperative agreement financial match requirements, workforce needs and readiness, broadband and connectivity barriers, and the impact of the State's fragile economy on HIE financial sustainability and EHR adoption.

## Challenges for Proceeding with Statewide Efforts

OHIT, through this project, has identified several challenges in proceeding with development of an HIE infrastructure. Among them are:

- Lack of sufficient existing HIE infrastructure, including Regional Health Information Organizations and Community HIEs that can be leveraged or expanded.

- The fragile State economy and budget crisis that reduce available resources necessary for implementing an HIE infrastructure and meeting federal financial match requirements.

- The possibility that necessary legislation will not be enacted during the next biennial session of the Nevada Legislature, which begins in early February 2011. Limited to 120 days, the State legislators will be faced with a minimum $3 billion budget shortfall during the next biennium, meeting a State constitutional reapportionment requirement, a new governor, and a turnover of approximately half the members due to term limits.

- Insufficient broadband connectivity to meet HIE and meaningful use requirements. Nevada is the most mountainous State, and the physical terrain may require alternate connectivity solutions. Lack of financial resources to add statewide broadband connectivity may impede HIE implementation.

- Low EHR adoption rates, which impede the ability to implement HIE.

- Uncertainty of financial resources and lack of successful operational and financial sustainability models.

- Lack of federal standards.

The findings associated with many of these challenges are addressed in further detail in Section 4.1 of this report.

## Nevada HIE Governance Structure

The State HIE Cooperative Agreement provides the states with the flexibility to select an HIE governance structure that works best for them. Nevada anticipates that a state designated entity (SDE) will operate the HIE, with regulatory oversight done by the State and a public-private partnership governing SDE operations. The assessment results seem to support this type of governance model.

## Engagement of Key Stakeholders

The HIT Assessment looked at the extent in which the right stakeholders are engaged in the planning process and identify gaps in participation. Specific questions about stakeholder involvement were used in the interviews and focus groups conducted for the assessment.

Overall, participants agreed that the right stakeholders have been involved in State level planning efforts. They also noted that it would be beneficial to increase participation by health plans, local/county health authorities and agencies providing direct services, and ancillary service providers. For a list of identified stakeholders and outreach conducted for the assessment, refer to Appendix C.

Several participants mentioned the need for greater involvement from health plans. Even after repeated outreach to this key stakeholder group, only two health plans participated in the assessment. Health plans have four representatives on the HIT Blue Ribbon Task Force: the State's largest private health plan, the State's largest consortium of self-funded health plans, Nevada Medicaid, and the State insurance commissioner. In addition, the Nevada Association of Health Plans participates on a Task Force Subcommittee. Current health care insurance coverage of Nevada's population is grouped as follows: 20% uninsured, 20% public program (Medicare, Medicaid and SCHIP), 39% private health plans, and 21% ERISA/self-funded plans. The federal Employee Retirement Income Security Act (ERISA) regulates the operation of a self-funded health

benefit plan if an employer chooses to establish one, as opposed to the state regulation of private health insurance plans.

Several participants also mentioned the need for greater involvement from county and local health authorities. Nevada has four health authorities for the public health of the State's 17 counties. Southern Nevada Health District is responsible for Clark County, where approximately two-thirds of the State's population resides. The Washoe County Health District is responsible for the second largest urban county, where approximately one-fifth of the State's population lives. Carson City is the third health authority, responsible for those residents living in the State capital. The Nevada State Health Division and State Health Officer share responsibility for the remaining 14 counties. The health authorities have two representatives on the Task Force: the State Health Officer and the Carson City Health Officer. Much difficulty was encountered in reaching county and local health authority stakeholders, particularly direct service providers. There was little apparent knowledge about statewide HIT and HIE planning efforts, although during the January 2010 monthly meeting of the health officers, the State HIT Coordinator had briefed the group about the HITECH Act and State HIE Cooperative Agreement program. Many county and local agencies that provide health care services have EHRs or other HIT-related systems that will need enhancements in order to potentially interface with other EHR and HIE systems.

Ancillary service providers have the least amount of participation in State HIE planning efforts to date. For purposes of this assessment, these health care providers include: skilled nursing facilities, durable medical equipment (DME) providers, emergency medical services (EMS) providers, occupational therapists, physical therapists, pharmacies and pharmacists, dentists, chiropractors, and diagnostic clinics/labs. Engaged stakeholders suggested that the early involvement of all of these stakeholders is necessary in order to gain the buy-in necessary to have a comprehensive HIE that advances the quality of patient care. Despite the lack of awareness or engagement, many of these providers have been reached through this assessment.

## 2.5    Other Identified HIT and HIE Collaborative Efforts and Initiatives

Below are descriptions of representative HIT and HIE collaborative efforts and initiatives identified in Nevada through this assessment. The collaborative efforts and initiatives represent working groups of individuals that may be pulled into the overall framework of establishing a statewide infrastructure. This section addresses representative individuals or groups involved in various HIT and HIE efforts; systems and projects are described in Section 4.3. Due to the myriad of groups and initiatives that exist in Nevada, only those efforts identified by stakeholders and through research are captured in this statewide assessment.

### HIT Regional Extension Center

The ARRA HITECH Act includes funding for the HIT Regional Extension Centers (REC) program, which provides assistance to primary care clinicians implementing and adopting certified

EHRs. Available REC services include workflow assessment, process improvement, certified EHR vendor selection, system implementation, and assistance meeting meaningful use requirements.

In February 2010, HealthInsight was awarded an ARRA HITECH REC grant, to operate as the REC for both Nevada and Utah. The CEO of HealthInsight is a member of the HIT Blue Ribbon Task Force and serves as its Vice Chairman. HealthInsight staff also serve on Task Force Subcommittees.

A private, non-profit organization incorporated in Nevada and Utah, HealthInsight is vendor-neutral. It will assist providers with the selection process and the requirements to meet meaningful use, along with assistance for implementation and leveraging HIE. HealthInsight plans to work with 1,500 primary care providers in Nevada and Utah by the end of 2011, and another 1,000 in 2012 to 2013.

HealthInsight is working closely with DHCFP and OHIT, in addition to the HIT Blue Ribbon Task Force and its Subcommittees. The three entities have regularly scheduled meetings to ensure coordination of HIT and HIE efforts. HealthInsight is also coordinating and collaborating with many other HIT and HIE stakeholders in Nevada to assess and monitor statewide progress of EHR adoption, and its impact on providers and patients.

## Broadband Task Force

In July 2009, Governor Jim Gibbons issued an Executive Order establishing the 12-member Nevada Broadband Task Force to ensure broadband accessibility, availability, affordability, and reliability across the State. The mission of the Broadband Task Force is to identify and remove barriers to broadband access and identify opportunities for increased broadband applications and adoption in un-served or underserved areas of Nevada. The Broadband Task Force has provided oversight of the ARRA funding received for broadband mapping and data management, and is charged with ensuring grant compliance.

Broadband connectivity for health care providers is critical to successful HIE implementation, EHR adoption, and meaningful use. Without broadband connectivity for HIE, it will be difficult for certain eligible providers to qualify for EHR incentive payments. Providers in Nevada's rural counties are often underserved by broadband service or have no service available. The Broadband Task Force has been coordinating efforts with the HIT Blue Ribbon Task Force, since November 2009, regarding overlapping priorities and goals. OHIT anticipates overlaying the results of this assessment with those of the State broadband mapping project to determine how both Task Forces can collaborate effectively to meet HITECH mandates.

## Provider Professional Associations

Many of the health care professional associations in Nevada were consulted regarding this assessment, through interviews and focus groups. In particular, the assistance and support of the

Nevada State Medical Association, the Nevada Hospital Association, and the Nevada Nurses Association in conducting this assessment were greatly appreciated. In general, most of the associations support EHR adoption and HIE participation by their members in concert with statewide efforts, and a few have representation on the Task Force Subcommittees, either directly or indirectly. Executive-level managers from a few of the associations participate in the State's efforts through the HIT Blue Ribbon Task Force. In this capacity, they are able to provide input for the overall direction at the State level on behalf of their members. In addition, this helps them keep current with the HIT and HIE regulatory impacts on their members.

## Nevada Rural Hospital Partners

The Nevada Rural Hospital Partners (NRHP) is an alliance of 14 small and rural hospitals, serving approximately 300,000 people within a geographic area about the size of New England. As the voice of the Nevada rural hospitals, it works to ensure the viability of its members through policy and regulatory advocacy, reducing costs, generating savings, enhancing quality of care, sharing resources, and expanding HIT utilization. NHRP is coordinating the HIT, EHR and HIE efforts of its members, and serves on HIT Task Force Subcommittees. For more information about the specific efforts through NRHP, please refer to Section 4.3.

## College of Southern Nevada HIT Training

The College of Southern Nevada (CSN) is part of a federally-designated regional consortium of community colleges (Arizona, California, Hawaii and Nevada) that were recently awarded ARRA funds from the HITECH Community College Consortia to Educate HIT Professionals program. In addition to provider readiness, a ready labor pool of qualified IT and HIT professionals is key to successful EHR adoption and sustainable HIE infrastructure. As a component of the HIT Workforce Program, this grant program seeks to rapidly create health IT education and EHR training programs at community colleges or expand existing ones. The training being developed by CSN will be offered online to interested parties and will have four different courses for different workforce roles: workflow redesign specialist, clinical practitioner support specialist, implementation specialist, and EHR trainer.

## EHR Nevada, SNMIC, HIMSS, and MGMA

EHR Nevada is a joint initiative of the Southern Nevada Medical Industry Coalition (SNMIC), the Nevada Chapter of the Healthcare Information Management Systems Society (HIMSS Nevada), and the Nevada Chapter of the Medical Group Management Association (MGMA Nevada). High-level descriptions of these organizations can be found in Appendix C. All of the collaborating partners are dedicated to supporting quality healthcare in Nevada. EHR adoption and HIE have become prominent themes of their recent work. EHR Nevada educates the healthcare community about EHRs and other HIT and HIE initiatives through seminars, forums, expositions, and online resources.

# 3 Methodology: Identifying Stakeholders and Existing HIT and HIE Efforts

## 3.1 Interviews and Focus Groups

Qualitative research was conducted for the assessment using two methodologies: individual interviews and focus groups with stakeholders. The purpose of the research was to:

1. Assess the current and planned levels of EHR and HIE readiness, implementation, and adoption by Nevada's health care community.

2. Gauge stakeholder involvement in and understanding of State level HIT and HIE planning efforts.

3. Identify barriers to EHR and HIE readiness, implementation, and adoption.

The approach to identifying stakeholders for involvement in the assessment included the following:

- Working with OHIT and DHCFP staff to determine key stakeholders to include in the assessment.

- Reviewing existing lists of stakeholders and workgroups from the DHHS HIT Web site and the HIE Cooperative Agreement Application.

- Interviewing relevant State staff to gain an understanding of existing Nevada provider groups and other stakeholders.

- Obtaining additional contacts through interviews and focus groups with stakeholders.

To maximize the number of views represented as part of the qualitative data gathering effort, a variety of outreach methods were employed. Partnerships with the organizations represented on the HIT Blue Ribbon Task Force were leveraged to extend outreach through newsletters, postings on Web sites, and distribution of information through Listservs. The assessment team made phone calls and sent emails to members of the HIT Blue Ribbon Task Force, to leaders of an extensive number of provider associations in Nevada, and to various HIT and HIE work groups to inform them of the assessment process, to identify the best methods for reaching out to their members and constituencies, and to coordinate the scheduling of focus groups and interviews.

A fact sheet describing the assessment and State level HIT and HIE planning efforts and invitations to the focus groups were distributed to the stakeholders, who were asked to distribute this information to their colleagues. Staff from OHIT and DHCFP also contacted key stakeholders, including HealthInsight (Nevada's REC), various State medical licensing boards (e.g., State Board of Medical Examiners, State Board of Nursing, and State Board of Pharmacy), and other DHHS divisions, to encourage their involvement in the assessment. The approach for engaging various stakeholders was tracked during the course of the assessment. Extensive phone calls were made, with follow-up emails, to encourage participation from organizations and stakeholders who were not

engaged. Additional focus group events were scheduled to increase stakeholder participation and to enhance the diversity of viewpoints represented in the data. Contacts were made with additional providers and stakeholders as they were identified during this process. The assessment team also used the interviews and focus groups as an opportunity to build awareness for the online survey on EHR and HIE adoption.

## Interview Methodology

In order to capture more in-depth perspectives from stakeholders, the project team arranged interviews, using the process described in Section 3.1 above. An interview template was used to guide the discussion during each stakeholder interview and maintain consistency of the topics covered. The interviews were conducted in-person or by telephone. Each interview was reviewed and summarized into the findings included in Section 4.1 of this report.

A total of 32 interviews were conducted. The following are the primary stakeholders included in the interview portion of the assessment:

- College of Southern Nevada

- EHR Nevada

- Evergreen Healthcare (Skilled Nursing Facilities)

- Falcon Technology

- University of Nevada School of Medicine

- Indian Health Board of Nevada

- Intuun Systems

- Nevada Department of Corrections

- Nevada Department of Health and Human Services Office of Health Information Technology (State HIT Coordinator)

- Nevada Division of Child and Family Services

- Nevada Division of Aging and Disability Services

- Nevada Division of Mental Health and Developmental Services

- Nevada State Health Division

- State Health Division Bureau of Child, Family and Community Wellness

- State Health Division Bureau of Early Intervention Services

- State Health Division Bureau of Health Statistics, Planning and Emergency Response

- State Health Division Bureau of Health Care Quality and Compliance (licenses health facilities, medical laboratories, and laboratory personnel)

- State Health Division Office of Emergency Medical Systems

- State Health Division Office of Health Statistics and Surveillance

- State Health Division Office of Informatics and Technology

- Nevada Chapter of American Health Information Management Association  (NvHIMA)

- Nellis Air Force Base

- Nevada Health Centers, Inc.

- Nevada Hospital Association

- Nevada Managed Care Quality Improvement Council

- HealthInsight (Nevada's Regional Extension Center)

- Nevada Rural Hospital Partners

- Nevada State Medical Association

- Physician's Managed Care

- Southwest Medical Associates

- U.S. Army National Guard

- Quest Diagnostics

## Focus Group Methodology

For the focus groups, the methodology employed was similar to the one used for individual interviews. A focus group template was used to maintain consistency of the topics covered. Focus groups were conducted in person or by telephone and recorded through meeting minutes. A fact sheet about State level HIT and HIE planning efforts was distributed at the end of each focus group and participants were encouraged to complete the online survey. Focus group notes were reviewed and summarized in the findings included in Section 4.1 of this report.

A total of 15 focus group meetings were offered. There were attendees at 10 of the 15 scheduled events, and approximately 80 stakeholders participated in the focus groups. The following are the primary stakeholders that participated in the focus group portion of the assessment:

- Hospital Chief Executive Officers

- Nurses

- Physicians

- Skilled Nursing Facility Operators

- Indian Health Board of Nevada Members

## 3.2    Online Survey

### Survey Methodology

With assistance from the State project team, an online survey was created to solicit feedback from Nevada providers regarding adoption of EHR. The survey was announced on the Nevada HIT Web site and labeled as the Nevada E-Health Survey. Additionally, multiple emails were sent to stakeholders, including providers listed in the MMIS, stakeholders in various organizations and associations, and providers who participated in interviews and focus groups.

The online survey was available from May 17 through July 6, 2010. During that time, 403 respondents initiated the survey. 285 respondents completed the entire survey, meaning they pressed the finish survey button on the last page. However, 79 partial responses were included in the final data set used for analysis. 43 responses were excluded from the final analysis for various reasons: duplicate responses for the same respondent and submission of invalid responses (for example, all responses simply have an 'x' which is not a valid response). For the final sample size of 364 responses, a total of 3,621 physical provider locations were identified through the survey. Providers were asked about the number of locations that were part of their organization, and this represents the summary of these responses. The number of locations for some providers may include location counts for practices that have national presence; this may help explain the large number of locations included in the survey responses.

### Population - Nevada Licensed Professional Providers and Hospitals

In order to determine how large the sample should be, the total provider population was examined, including facilities, hospitals, clinics, practices, medical equipment suppliers, pharmacies, dentists, etc. To get an estimate of the total number of providers in Nevada, information from the May 2010 National Plan and Provider Enumeration System (NPPES) database containing all individual (Type 1) National Provider Identifiers (NPIs) and group (Type 2) NPIs was used.

Since the focus was on provider locations, all data containing NPI Type 2 with a business practice location in Nevada was included, and represented approximately 5,503 records[2]. This number includes any health care entity that is registered with NPPES, including primary care physicians (PCP) and specialty practices, facilities, clinics, sole practitioners, dentists, hospitals, DME suppliers, and pharmacies. Using this method provides a relatively close estimate of the population of providers operating in Nevada.

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[2] Only three facilities had a deactivation date in the latest NPPES database. The affect on sample size is inconsequential so we kept the "deactivated" in the total. Originally, this number was 5,504. However, one of the entries was incorrectly keyed as "NV" when it should have been "NY" (Niagara Falls, NY).

## Statistical Significance and Level of Confidence

With a provider population of 5,503 and a sample of 364, the expected confidence interval would be ±4.96 at the 95% confidence level. That is, if 50% of the respondents said they were going to implement an EHR, then the true population value would be between 45.04 and 54.96 with 95% confidence.

**Example:** 50% response rate in sample is equivalent to 45.04% – 54.96% rate in population

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

### Response Rate
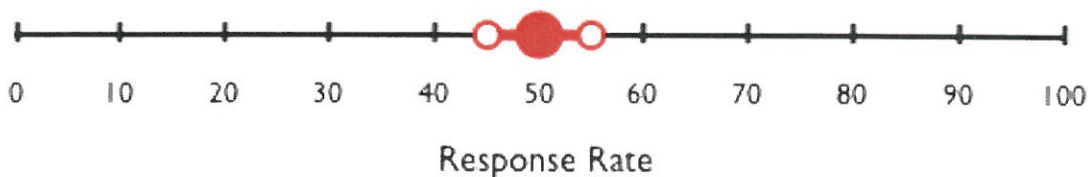
## Stratifying the Sample over Urban vs. Rural and Hospital vs. Non-Hospital

Two dimensions of the survey data were analyzed in further detail: urban vs. rural and hospital vs. non-hospital. In order to determine whether the cohorts would provide sufficient statistical reliability, both population and sample sizes were determined for each cohort.

The population counts for the cohorts are in the following table. The final sample number is listed in the grand total cell (bottom-right). The number of responses needed from each cohort based on the population proportion is the first number and the second number is the current number of responses.

For example:

Population: 42

Number needed to achieve indicated level of confidence: 3

Actual: 16

In this example, "42" represents the population for the cohort. "3" is the number of responses needed to achieve the indicated level of confidence. "16" is the actual number of responses.

Table 1 – Population counts

|  | Hospital | Non-Hospital | Total |
|---|---|---|---|
| **Urban** | Population: 42<br><br>Number needed to achieve indicated level of confidence: 3<br><br>Actual: 16 | Population: 4618<br><br>Number needed to achieve indicated level of confidence: 305<br><br>Actual: 250 | Population: 4660<br><br>Number needed to achieve indicated level of confidence: 308<br><br>Actual: 266 |
| **Rural** | Population: 14<br><br>Number needed to achieve indicated level of confidence: 1<br><br>Actual: 9 | Population: 829<br><br>Number needed to achieve indicated level of confidence: 55<br><br>Actual: 89 | Population: 843<br><br>Number needed to achieve indicated level of confidence: 56<br><br>Actual: 98 |
| **Total** | Population: 56<br><br>Number needed to achieve indicated level of confidence: 4<br><br>Actual: 25 | Population: 5447<br><br>Number needed to achieve indicated level of confidence: 360<br><br>Actual: 339 | Population: 5503<br><br>Number needed to achieve indicated level of confidence: 364<br><br>Actual: 364 |

The urban vs. rural data was determined by matching the list of ZIP Codes with managed care regions in Nevada, i.e. areas of mandatory managed care are considered urban while fee-for-service areas are considered rural. Some minor discrepancies in six NPPES records were corrected to use a valid ZIP Code.

Hospital vs. non-hospital population counts were determined from data provided by the Nevada State Health Division Bureau of Health Care Quality and Compliance. This data was then matched with the ZIP Code data to obtain marginal totals.

Based on the sampling, the required levels were reached for hospitals. In fact, based on proportion, hospitals would be considered over-represented in the data. The required levels were not reached for urban non-hospitals, but the required levels were reached for rural non-hospitals. The overall required levels were met, as shown by the total row in Table 1 above. Therefore, the desired level of confidence was met for the population.

In addition, the population values from the NPPES database are most likely overstated. Due to some minor inaccuracies in the NPPES database, there may be health care entities that are double-

counted in the population count. Because of this, the required sample size will also be overstated, i.e., it will appear that more respondents are required than is actually necessary.

## Potential Bias

One of the biggest concerns when conducting an online survey is evaluating if the response pool is indeed a representative sample. Because of the online nature of the survey, there are three potential types of bias in the Nevada E-Health Survey results:

- **Undercoverage bias** – A portion of the target population was not notified of the survey, due to the nature of online surveys, unavailability of comprehensive provider information and time constraints.

- **Nonresponse bias** – Some portion of the population had the opportunity to respond, but chose not to.

- **Voluntary response bias** – Respondents are self-selecting and may be motivated to respond because they see the survey as an opportunity to express their point of view.

### 3.2.1.1 Undercoverage Bias

Some types of providers will be under-represented due to the inability to obtain comprehensive provider information and the nature of online surveys. As a result, it is likely that the results over-represent providers who have already adopted or plan to adopt in the near future. For example, if the survey says 50% are planning to implement an EHR within the next year that number would most likely be overstated because providers without broadband access are not likely to respond.

### 3.2.1.2 Nonresponse Bias

Multiple attempts were made to reach stakeholders, as described in Section 3.2. Despite these efforts, not all providers reached through the assessment completed the survey. There are potential respondents that may not have an interest in implementing or adopting EHRs right now and therefore, did not want to fill out the survey. Obviously, provider incentive payments help encourage some providers to participate – but what about providers that do not have a significant Medicare patient base and do not have 30% of their patients on Medicaid? These providers may avoid filling out the survey since they may feel it does not apply to them.

### 3.2.1.3 Voluntary Response

Providers will be more likely to participate if they feel like there are implications as a result of their participation. They want to make sure their position is well represented. Some providers and clinics may feel this is an opportunity to shape Nevada's public policy regarding HIT and HIE so they are eager to represent their point of view. This introduces a voluntary response bias where these types of providers may be over-represented.

# 4 Results of HIT Assessment

## 4.1 Findings: Provider HIT Adoption, Readiness, and Barriers

This section addresses the current uses of EHR and HIE, the overall direction for EHR and HIE by health care providers, barriers to adoption for both EHR and HIE, stakeholder engagement, and stakeholder perception of HIE Governance. Findings have been identified for the following six themes:

- Theme 1: Current Uses of EHR Systems
- Theme 2: Direction for EHR Adoption and HIE Utilization
- Theme 3: Meaningful Use and Incentive Payments
- Theme 4: Barriers to Advancing EHR Adoption and HIE Utilization
- Theme 5: Stakeholder Awareness and Engagement
- Theme 6: HIE Governance

## Theme 1: Current Uses of EHR Systems

**Many of the providers reached through the assessment show an interest in increasing adoption, despite the numerous barriers that exist.**

Despite all of the challenges facing health care providers in Nevada, most providers that were interviewed, participated in focus groups, or responded to the survey appear to have an understanding of the value that is gained or can be gained through EHRs and HIE. For many focus group participants that do not use EHR systems, there was great interest in obtaining more information about the EHR options available. Uses of EHR and HIE vary greatly, but the trends towards growing adoption are evident.

Nearly half of all survey respondents have an EHR (46%) and another 32% of the non-EHR users plan to implement a system within the next five years. A breakdown of current and planned uses of EHRs by urban and rural providers is found on the following page.

Figure 1 – Regional breakdown of EHR implementation plans
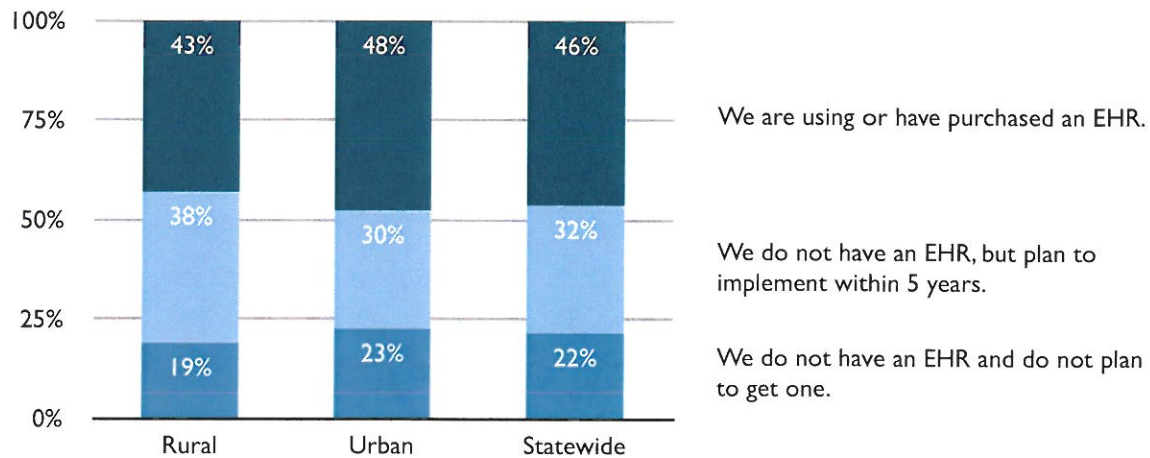


The numbers reported through the survey for current EHR adoption rates are substantially higher than the national average for EHR adoption in this country. This is may be due to the various biases associated with the online survey.

Almost one-third of survey responders plan to adopt an EHR in the next five years. Several providers that participated in focus groups stated the need for additional information and help on making EHR and HIE decisions. There are many resources available, including Nevada's REC for implementation and training assistance, online listings of CCHIT certified systems, and financial resources such as the incentive payments, but providers may need guidance on how to obtain information and assistance.

For assessment participants that do not have an EHR, an overwhelming number of survey respondents who are non-EHR users – 81% – want an EHR to track and maintain patient demographic information. Additionally, more than 50% of all respondents are interested in functionality that supports patient-centered care, like a personal health record.

### Providers with EHRs report using a broad range of EHR functionalities.

Through the survey it was discovered that EHR choices for providers are numerous, and outside of a few systems reportedly used by several providers, many providers described using unique EHRs or other HIT. Survey respondents reported uses of well over 200 different EHR systems. However, the statewide HIE infrastructure is expected to be vendor neutral, allowing for certified systems to interface with the HIE infrastructure. Some of the key functions being used by providers with EHR systems are described in the subsequent subsections.

### Tracking Clinical and Demographic Data

Providers demonstrated they use EHRs very broadly to track and manage clinical care information and to support operations. Figure 2 below highlights the top five uses of an installed EHR:

**Figure 2 – Top five uses of installed EHRs**
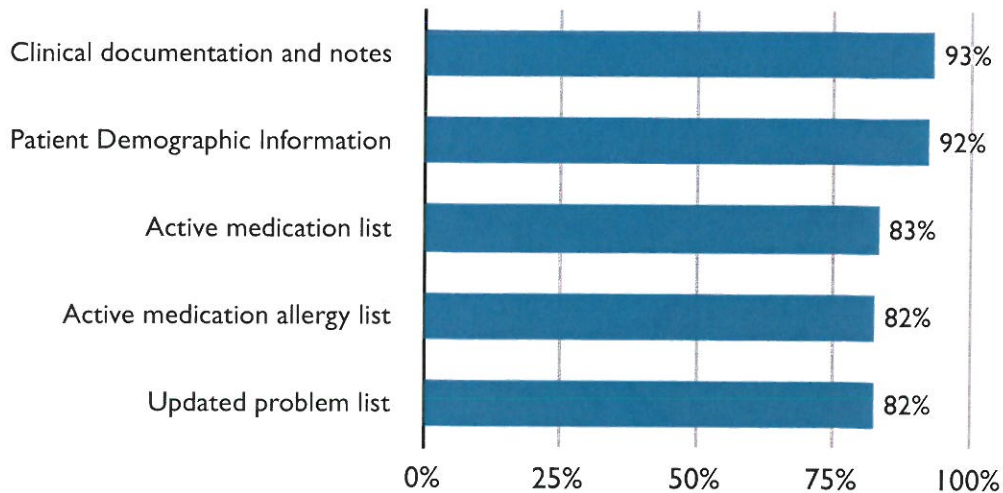


The above graph illustrates that EHR users largely utilize the systems to capture and maintain demographic and clinical information about a patient, which is a large foundation of many EHRs.

Below are other system functions being reported by a large portion of providers:

- 64% of EHR users report sending claims from the EHR for billing purposes.

- 55% of EHR users use a Computerized Provider Order Entry (CPOE) system. Another 19% of providers have the functionality available, but do not use it within their system. CPOE is used fairly evenly to support lab, test, medication, and referral orders.

- 55% of EHR users utilize e-prescribing. However, not all EHR users use e-prescribing to transmit the prescription electronically. In fact, only 61% of e-prescribing users report using the function to transmit electronically. Most use e-prescribing to maintain active medication lists (86%), to check for drug-drug interactions (77%) and drug-allergy interactions (79%).

- Almost half of EHR users (48%) are providing patient's access to their personal health information through a personal health record.

Only 28% of EHR users use a Clinical Decision Support function, which may illustrate a lack of more robust functions being used. As the body of knowledge for clinical guidelines, chronic disease management, and clinical outcomes grows, many EHR proponents believe that a large advantage of

an EHR is its decision support capabilities. Clinical Decision Support should not replace a provider's expertise or decision-making, but it can more readily provide information to inform decisions. A major issue with adopting such functionality is that typically a data repository is needed for data compiling and querying.

Other reported uses of EHRs can be found in Figure 3 below.

Figure 3 – Percentage use of EHR functions

| Function | Percentage |
|---|---|
| Track Patient Consent | 61% |
| Incorporate lab tests and results | 59% |
| Generate reports by condition | 58% |
| Track Care Plan | 57% |
| Employ role-based access to EHR functions | 51% |
| Provide discharge instructions to patients | 50% |
| Provide patients with an electronic copy of health info | 49% |
| Provide a Personal Health Record | 48% |
| Use Online Scheduling | 45% |
| Use a Continuity of Care Record | 40% |
| Create benchmarks and hospital priorities | 37% |
| Plot and display growth charts for children | 34% |
| Use a Clinical Data Warehouse | 30% |
| Secure email between providers and patients | 25% |
| Other | 9% |

As shown above, despite the wide range of uses, EHRs are still not used to support all clinical and operational needs equally.

## Theme 2: Direction for EHR Adoption and HIE Utilization

The EHR adoption levels vary by provider type with the large hospitals and large physician practices reporting higher levels of EHR adoption compared to other providers.

Throughout the analysis, obvious trends in adoption among specific provider categories were evident. These high-level categories are: hospitals; physician practices, including PCPs and specialists; centers and facilities; and ancillary services and other. Further analyses regarding these categories are provided below. Understanding the current EHR uses and barriers to uses can help DHCFP and OHIT customize their HIT plans, especially provider communications, to accommodate the differing needs of providers.

## Hospitals

Many large hospitals, especially urban hospitals we have identified in this assessment through interviews, focus groups, and the survey, are utilizing an EHR (or multiple EHRs) for many functions related to patient care. Many of these hospitals are or will be undergoing system enhancements in order to meet the meaningful use criteria.

In focus groups sponsored by the Nevada Hospital Association, CEOs of many of the member hospitals said they have mature EHR systems in place and are currently undergoing or are planning system upgrades and enhancement in order to meet the meaningful use criteria. A vast majority of the large, urban hospitals said they are using EHR systems and are working toward meeting the meaningful use criteria. Based on the adoption levels being reported by the large, urban hospitals, they are also reporting the greatest capacity to engage in HIE.

On the other hand, many of the smaller hospitals, including some rural hospitals, are struggling to implement EHRs. As an example, 8 of the 14 hospitals in the Nevada Rural Hospital Partners Association currently do not have an EHR in place. A few small hospitals are rolling out EHR components or functions in an incremental way.

The survey results support information gained from 24 hospital CEOs who participated in focus groups. Of the 19 hospitals that responded to the survey question characterizing their EHR system, eight reported they have an EHR installed and are using it and 11 hospitals reported they do not have an EHR. Of those who do not have an EHR, nine said they plan to obtain and implement a system within the next five years and only two said they do not plan to implement EHR.

## Physician Practices – PCPs and Specialists

According to the survey, physicians demonstrate fairly high-levels of adoption despite the number of barriers being reported. In addition, PCPs reported higher-levels of adoption than specialists.

- For the primary care physician survey respondents, 61% already have or are implementing an EHR and 39% have not adopted EHR.

- For the survey respondents in the specialist category, only 42% already have or are

implementing an EHR, while 58% have not adopted EHR.

- Of those that do not have EHR in place, PCPs are more likely to adopt within the next five years (74%), compared to 53% of specialists that plan to adopt within the next five years.

While these numbers appear fairly high, large physician groups or offices – which for purposes of this assessment are classified as 20 providers or more in a practice – have reported greater EHR adoption than small physician practices. Many large physician practices identified through the interviews and focus groups reported using EHRs for various functions, including e-prescribing, CPOE, demographic and clinical care management, and internal reporting. Based on information from the Nevada State Medical Association and focus groups and interviews, small practices critically lag in terms of EHR adoption. Small and medium-size physician practices and independent physicians may require significant financial and technical assistance to increase EHR adoption and to increase participation in statewide HIE.

## Ancillary Services and Other

Based on the survey, only 34% of ancillary providers are currently using EHRs, which is the lowest of all provider categories that participated in the survey. In addition, 34% plan on implementing an EHR within the next five years, while 32% have no plans on implementing an EHR. The ability to gather qualitative information on ancillary service providers, through interviews and focus groups, and determine the direction for EHR adoption and HIE utilization for the assessment was more difficult than some of the other provider categories.

Below are reasons being reported by ancillary service stakeholders for the lack of participation in the assessment:

- The EHR incentive payments may not be applicable to some of the providers in this group, and therefore, they are not as interested in participating in the assessment.

- Uses of HIT and HIE might be more limited.

- Even if uses of EHRs are extensive (e.g., pharmacists) their understanding of how they integrate with the larger health care HIT and HIE directives at the State level might not be fully understood.

- Providers are not interested in participating in efforts being conducted at the State level due to barriers, such as privacy and security concerns.

As mentioned in the second bullet above, uses of EHRs for some of these providers might be more limited or they may access a small portion of a patient's medical record. As an example, EMS providers that provide emergency care in ambulances may not have sufficient time to access medical records in a system. However, EMS providers still provide a hard copy report to the emergency room providers, and this report is incorporated into the patient's medical record. In addition, a DME provider may only receive a portion of a patient's medical record since the provider may need

limited information for obtaining a medical device. Despite any limitations for accessing comprehensive medical records, ancillary service providers still have a significant stake in the electronic storage and exchange of health information. This category of providers may require the largest amount of education and assistance for engaging in statewide HIE and for growing EHR adoption rates.

## Facilities and Centers

The facilities and centers category include long-term care facilities, residential treatment centers, psychiatric residential treatment facilities, ambulatory surgical centers, community mental health centers, and other identified centers. Collectively, 58% of facilities are currently using an EHR in some capacity. 29% plan on implementing an EHR within the next five years, while only 12% have no current plans of implementing an EHR. Facilities and centers report using a broad range of EHR functions in many different ways, including creating benchmarks and organizational priorities. Below are some of the highest reported uses of EHR functions by facilities and centers:

- Tracking patient consent (85%).

- Incorporating lab tests and results (77%).

- Plotting growth charts for children (74%).

- Generating reports by condition (74%).

- Creating benchmarks and organizational priorities (70%).

- Providing discharge instructions (67%).

The ability to gather qualitative information on this provider category was fairly difficult as well due to limited engagement in the assessment. This category of providers may also require a large amount of education and assistance for engaging in statewide HIE and for growing EHR adoption rates.

**There is a lack of exchange of health information occurring in the Nevada health care system outside of a provider's or stakeholder's network.**

While there is a large volume of electronic billing and claims processing and even a fair amount of e-prescribing and lab ordering and lab results being exchanged electronically, HIE on larger scales across disparate organizations does not appear to be rapidly occurring. As an example of common exchanges taking place, almost 20% of all survey respondents engage in e-prescribing, but only 61% of the e-prescribing users actually report sending the prescriptions electronically.

Closed system electronic clinical data is primarily shared through "vertical portals" and one-way clinical data transfers. Hospitals and practices reported exchanging within their own network or system. Most of these systems use a web-based portal to track and share clinical information. It is even possible for such systems to be accessed by a provider outside of a network. As an example, a

physician that is independent from a hospital can login to a hospital's system to make a referral or see the results of a lab test. However, providers may require multiple logins to different practice or hospital systems and still not have access to centralized patient information.

Only 20% of all survey respondents indicated they participate in Regional or Community Health Information Organizations. Of these, about half indicate the purpose of their exchange is to integrate health systems or providers. This is supported by interviews and focus groups and indicates that exchanges occur primarily to provide access to the same EHR among a network of providers and specialists.

Figure 4 on the following page provides a breakdown of how providers, who responded to the survey, send electronic health information:

**Figure 4 – Percentage of providers who send electronic health information**

| Category | Percentage |
|----------|-----------|
| Health Plans for claims/billing | 64% |
| Health Plans for Eligibility Verification | 34% |
| Providers (outside of hospital) | 22% |
| Patients | 19% |
| Hospitals (in system/affiliated) | 16% |
| State immunization registries | 12% |
| Vital Statistics | 10% |
| Public Agencies (quality reporting) | 9% |
| Public Health | 9% |
| Hospitals (not affiliated) | 7% |
| Other care settings | 7% |
| Trauma Registries | 4% |
| Electronic record locator sharing pool | 4% |

Despite the finding that limited HIE is taking place in Nevada, exchange of health information is occurring across providers' boundaries. As an example, St. Mary's Hospital, Northern Nevada Medical Center, Quest Diagnostics, and LabCorp send and receive clinical information through a system using HL7[3] interfaces. In addition, Nevada Rural Hospital Partners has an HL7 interface engine to integrate 17 different systems. Other large hospitals report exchanging clinical information with other practices and specialists. Large laboratory providers have reported exchanging clinical information through national networks and even outside of their networks. Also, a few providers are

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[3] Health Level Seven International (HL7) is a not-for-profit, ANSI-accredited standards developing organization dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services.

working on a pilot to exchange immunization information through an HL7 interface with the State's immunization registry system.

Federally operated systems are the most advanced when it comes to information exchange capabilities. Their systems are nationwide or global (as in the case of the military/Department of Defense (DoD) system) and their information sharing is done primarily within their own organizations or with other authorized systems (as between the Veterans Affairs (VA) and the DoD). The interviews revealed records exchanges with civilian health care providers are still done primarily via paper-based records or through separate disc files and not through a network or interface. However, exchanges with other systems are being tackled at the federal level through such efforts as National Health Information Network (NHIN)[4].

Despite the limited uses of health information exchange, 55% of respondents have an interest in participating in HIE. Nearly all focus group and interview participants expressed an understanding of the value HIE can provide in patient care.

**Large hospitals, large networks of providers, and other providers that have consciously advanced their EHR capacity ahead of the legislation are the primary providers who have some level of readiness and capacity to participate in an HIE.**

Overall, readiness and capacity of Nevada's health care community to participate in HIE was probably the most difficult dimension for assessment participants to gauge. With the exception of some of the large hospitals and other large health care providers and practices, interview and focus group participants repeatedly responded they did not have any information about the capacity that exists within their local community, their region or throughout the State for use and leveraging of HIE. It does not appear that much HIE capacity exists outside of the large hospital systems and some large practices.

According to interviews and focus groups, providers that have received federal, State, and other grant funds generally utilize EHRs in more robust capacities than physicians and other providers who have not received such funding. Adoption of EHRs by these providers is very similar to hospitals in terms of using systems that support various functional modules, including e-prescribing, CPOE, patient demographic and diagnosis tracking, and some electronic transaction processing. Providers that fall into this category include military and VA hospitals and medical clinics based in Nevada, many Indian Health Clinics in Nevada, and some other providers that have received various grants, including Nevada Health Clinics, Nevada's largest Federally Qualified Health Center. Many of these providers are undergoing or already underwent system implementation and system enhancements based on grant and other federal funding.

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[4] The Nationwide Health Information Network (NHIN) is a set of standards, services and policies that enable secure health information exchange over the Internet. The NHIN will provide a foundation for the exchange of health IT across diverse entities, within communities and across the country, helping to achieve the goals of the HITECH Act.

Another significant capacity issue and barrier to statewide HIE is the lack of broadband infrastructure to support it. While T-1 lines have been deployed, they were shut down in rural areas due to cost. The Nevada Hospital Association and Nevada Rural Hospital Partners are trying to remedy the issues and seeking ARRA Broadband. However, until this capacity issue is addressed, use of HIE will not be widespread in rural communities. Additional hurdles for statewide HIE capabilities include the State's mountainous physical terrain, approximate 85% federal ownership of State land, and the sparsely-populated and frontier nature of most rural areas.

## Theme 3: Meaningful Use and Incentive Payments

**Many providers are still unsure about whether or not they will apply for the incentive payments.**

43% of survey respondents were "Not Sure" if they were planning to apply for the Medicaid or Medicare incentives. Figure 5 below shows providers' plans for the incentive. Please note that percentages below total greater than 100% since providers could select more than one option for this portion of the survey.

Figure 5 – Providers still unsure about which incentive to apply for
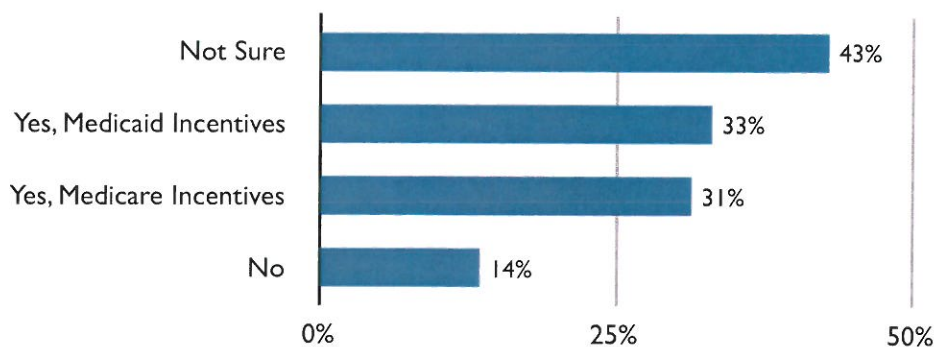


As shown above, 31% of survey respondents currently plan to apply for the Medicare incentives, 33% plan to apply for Medicaid incentives, and 14% said they would not apply. This is consistent with the results of the interviews and focus groups. Providers cited various reasons for their uncertainties about the incentives, including the following:

- Meeting eligibility criteria for the EHR Incentive Program.
- The State's plans for designing the EHR Incentive Program.
- Federal requirements for meaningful use.
- Abilities to meet meaningful use criteria based on EHR functions used.

The above uncertainties may explain why many respondents reported being "unsure" about applying for the incentive payments. These results represent an area of focus for DHCFP in conducting outreach with Medicaid providers for the EHR Incentive Program.

**Providers will have difficulty meeting the proposed meaningful use criteria in a timely manner.**

While 33% of survey respondents plan to apply for the Medicaid program, many providers need to enhance their systems or ensure more extensive use of their systems in order to meet meaningful use. However, even prior to meeting meaningful use, these providers will need to make sure they are eligible for payments. For those planning to apply for Medicaid incentives, the Medicaid patient volume is, on average, 28% of all patients. This information is based upon the percentage of Medicaid patients being reported by those survey respondents planning to apply for the Medicaid incentive. 28% is less than the 30% threshold for Medicaid incentive program eligibility (for most providers). It should be noted that this threshold percentage for many providers should dramatically increase in 2014 as Health Care Reform is expected to double the Medicaid population. Therefore, a larger pool of providers should be eligible for the program in 2014.

This illustrates the importance of auditing patient volumes being reported by providers. CMS has confirmed, through publishing of the Final Rule for the EHR Incentive Program and subsequent guidance, that such auditing is a responsibility of the states.

Results from the survey based on key Stage 1 meaningful use criteria of the EHR Incentive Program are found on the following page.

Figure 6 – Percentage of survey respondents seeking Medicaid incentives who currently meet key meaningful use criteria, including Core Set and Menu Set criteria

| Criterion | Percentage |
|---|---|
| Transmit e-prescriptions electronically | 52% |
| Provide clinical summaries for each office visit | 50% |
| Record demographics | 49% |
| Maintain active medication allergy list | 48% |
| Maintain active problem list | 48% |
| Use CPOE for medication orders | 40% |
| Record smoking status | 39% |
| Maintain active medication list | 37% |
| Incorporate clinical lab test results | 36% |
| Generate lists by specific conditions | 35% |
| Implement drug-drug and drug-allergy checks | 34% |
| Patient specific reminders | 26% |
| Provide patient with e-copy of health info | 24% |
| Implement one clinical decision support rule | 23% |
| Exchange key clinical information | 21% |
| Summary of Care Record for referrals | 18% |
| State immunization registry | 6% |
| Record and chart changes in vital signs | 4% |
| Submit electronic lab results (Hospitals only) | 4% |
| Submit electronic syndromic data | 3% |

Information in Figure 6 was reported through the online survey prior to publishing of the Final Rule of the EHR Incentive Program. Therefore, not all meaningful use criteria, as included in the Final Rule, were captured as part of the assessment. Based on these preliminary results, many Nevada providers will struggle to meet the 2011 criteria and qualify for the payments. For example, Clinical Decision Support (CDS) is a required criterion within the core set of meaningful use. According to the rule, in order to meet Stage 1 objectives for CDS, the eligible professional and the hospital need to implement one clinical decision support rule relevant to a specialty or high clinical priority

(eligible professional) or high priority hospital condition (hospital)[5]. However, the survey indicates that 28% of EHR users actually use CDS. And even within this functional area, most CDS users utilize this function routinely for medication alerts (65%), while less than half use it for clinical guidelines based on patient problem list, gender, and age (38%). Another 33% use it for patient specific or condition specific reminders (e.g. foot exams for diabetic patients). Some of the nuances around definitions for terms such as "clinical priority" will need to be well-understood by providers that plan to apply for the incentive program.

Another criterion for meaningful use is immunization reporting electronically when it is available. 87% of survey respondents reported that they do not routinely send/receive electronic data with this entity (more likely to fax, call, email or print). This represents an area where the State needs to clearly communicate with providers on current criteria and exchange requirements.

Looking beyond the 2011 meaningful use criteria, the statewide HIE solution must accommodate exchange of the currently defined criteria as well as criteria being defined for future stages. The State will need to provide assurances to providers that there will be capacity to support HIE as part of the exchange criteria for meaningful use.

The Nevada State Medical Association affirmed the concerns about meaningful use from anecdotal and focus group conversations with their members. HealthInsight also confirmed this concern in their role as the Regional Extension Center, based on anecdotal conversations with providers.

However, many of the large hospitals with EHRs report they are likely to meet the meaningful use requirements starting in 2011 and many are currently enhancing their systems. Generally, large hospitals appear to be best equipped to meet the meaningful use criteria by the required timelines.

## Theme 4: Barriers to Advancing EHR Adoption and HIE Utilization

**The most significant barrier to implementing, adopting and enhancing EHRs is cost.**

### Barriers for Non-EHR Users

Upfront capital for implementation of EHRs is the most widely expressed concern for providers who have not yet implemented systems. 48% of these providers in the survey indicated "too expensive" as the main reason for not yet implementing an EHR. Figure 7 below illustrates the main barriers for non-EHR users.

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[5] 42 CFR Parts 412, 413, and 422 et al. Medicare and Medicaid Programs; Electronic Health Record Incentive Program; Final Rule

## Figure 7 – Top five reasons respondents do not have EHR
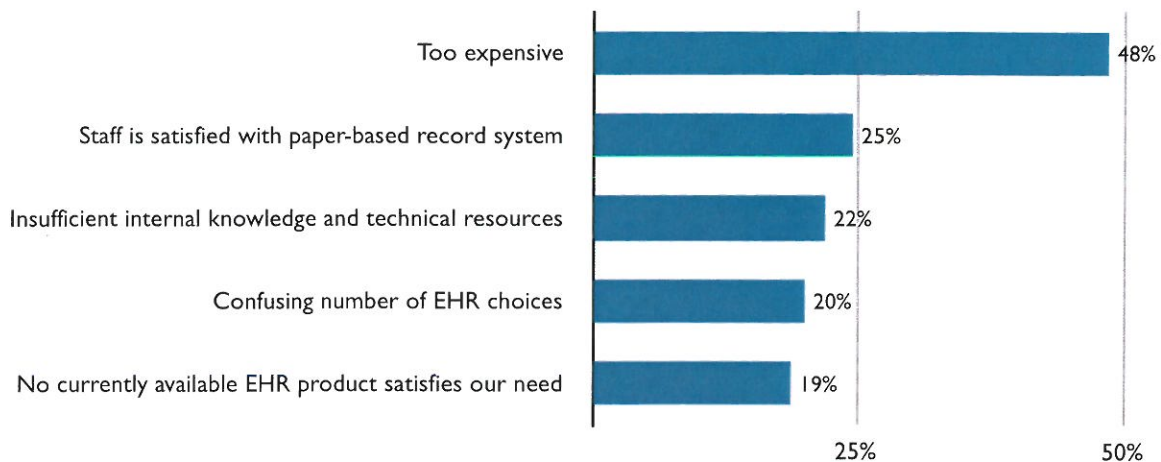


Many physician practices, smaller hospitals and clinics lack the necessary technical expertise, and have inadequate staff resources to make the necessary time investment or lack the necessary revenue to add staffing that might be required for implementation. Additionally, staffing issues are more profound for these smaller providers – backfilling for existing staff whose time would have to be devoted to getting the system operational can place significant strain on the organization's capacity to serve patients.

In addition, one-quarter of non-EHR users are satisfied with their paper-based system, and this is a common opinion for individuals when faced with any potential change that may impact their organization. The other two barriers highlight concerns about understanding and knowledge of EHR options that are available in the marketplace: "confusing number of EHR choices" and "no currently available EHR product satisfies our need." With all of the available resources that exist, providers may need to be directed to information that could help them with such decisions, like the REC or CCHIT Web site.

## Barriers for EHR Users

Ongoing maintenance and enhancement costs are the biggest barriers for those with EHRs (37% of EHR users). In addition, providers cite the need for additional training. However, 34% of EHR-using respondents do not report having any barriers to using their systems.

Figure 8 – Top five barriers to increased EHR use
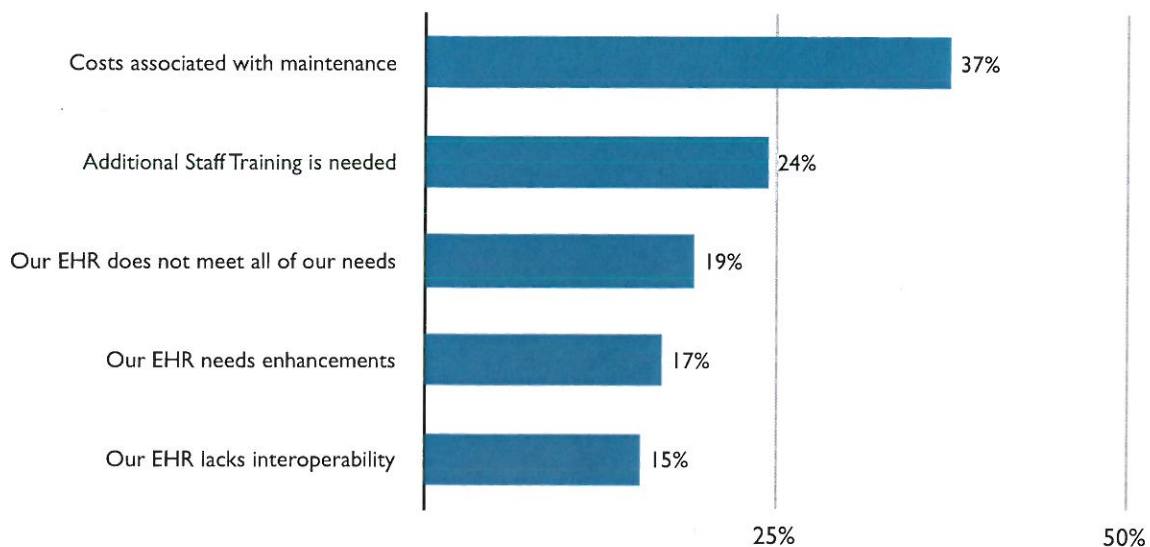


Assessment participants also expressed concerns about sustainability, i.e., whether systems will have a long "shelf life" or require replacement every four or five years. Providers are hesitant to invest in a system that they are not sure will be certified for meaningful use or may not have the capacity to participate in HIE. This is supported through the survey results, which illustrates the need for enhancements as the fourth largest barrier and the lack of interoperability as the fifth largest barrier.

**Providers are overwhelmed by the number of options for EHRs and the effort required to implement or enhance systems within the timelines established at the federal level.**

The assessment data shows a lot of confusion around EHR choices. Physicians reported feeling overwhelmed by the process of selecting a system with so many systems available. Of the survey respondents that do not have EHRs, the number of EHR choices was the third most often mentioned reason for not currently using an EHR.

In addition, many stakeholders also feel that the federal timeline for various requirements including meaningful use for EHRs is too aggressive given the number of barriers discussed in this report. Many of those that already have EHRs think they can meet the meaningful use requirements for Stage 1 within the rule's timeline. This does not encompass a majority of the provider community that has concerns about the timeline established at the federal level. However, the Final Rule for the EHR Incentive Program may ease some concerns regarding the timeline. As an example, if a provider signs a contract with a vendor to implement an EHR in 2011, the provider can qualify for a Medicaid incentive payment that year based on the adopt/implement/upgrade provision, not have to conduct reporting, and can demonstrate meaningful use the following year (2012). Providers may

not clearly understand the federal timelines for EHR implementation/upgrade, adoption and meaningful use. Therefore, this represents another area for additional education and outreach.

**Providers are hesitant to engage in HIE due to patient privacy and security concerns.**

Privacy and security concerns, including complexities and nuances of State laws and federal rules and regulations (such as HIPAA), are the most significant concerns among providers and other stakeholders. Interviewees, focus group participants, and survey respondents overwhelmingly cited HIPAA/privacy/legal issues as their number one concern about exchanging medical information with outside organizations. 52% of those who responded to the HIE barriers question in the survey, sited HIPAA privacy, security, and other legal concerns. Focus group participants, particularly hospitals, were also concerned about additional liability risks created by the electronic exchange of information. Privacy and security concerns were also addressed as the primary concern by other stakeholders interviewed as part of this assessment. Based on this, establishing the appropriate foundation of laws and regulations to support an HIE infrastructure is crucial and is best addressed as a priority at the State level.

**Most stakeholders know little about HIE, including technical infrastructure and recognized standards.**

There is a great degree of misunderstanding of information exchange standards, technical infrastructure, and interoperability requirements for participating in HIE. For those who responded to the question about barriers to exchanging health information with other organizations, the reasons are very clear. Other than privacy, security, and legal concerns, 41% cited access to technical support or expertise and another 45% cited insufficient information on options available.

This is most likely an indicator of the interoperability problem inherent within health care systems in general. States face great battles in implementing large-scale HIE and maintaining financially sustainable operations. The issues regarding standards and interoperability should lessen over time as the ONC Health IT Policy Committee provides greater guidance and assistance to states. The Health IT Policy Committee is currently providing recommendations to the National Coordinator for Health IT on a policy framework for the development and adoption of a nationwide health information infrastructure, including standards for the exchange of patient medical information.

Through the HIT Blue Ribbon Task Force, the governance structure, technical infrastructure, and financial sustainability models are still being discerned as of this report date. Since Nevada's HIT efforts are at the infancy stage, this may add to stakeholders' confusion.

**Many providers are in "wait and see" mode for further investments in EHR and HIE due to uncertainty around the details of costs for participation in HIE and integration with a statewide infrastructure.**

Individual physicians, particularly those in small practices, are still questioning what is required of them for EHR adoption and HIE exchange and if the value proposition or return on investment (ROI) of implementing the technology is worth their investment and effort in the end. These physicians expressed this concern both for implementation of EHR and participation in HIE. This concern was also expressed through the survey. 44% of those that responded to the HIE barriers question in the survey cited "ROI for HIE is unclear." Another 45% cited subscription rates being too high for exchange services.

Since a statewide HIE infrastructure has not been decided upon yet, this contributes to the "wait and see" mode by providers in terms of selecting HIT and HIE systems that will integrate with the State technical HIE infrastructure.

For providers further along in migration paths for EHR adoption, especially hospitals, there appears to be greater interest in investing and participating in HIE, but these stakeholders would like information on the HIE technical infrastructure and the associated costs. They do not want to make large investments if they select a system that does not fit the technical infrastructure being chosen for a larger HIE (regional or statewide).

These concerns are echoed in an open-ended question posed at the end of the survey. Sample provider responses to the last survey question – "Is there any assistance your organization needs from the State in regards to implementing, adopting, and using EHRs and/or HIE?" – are listed below:

- Assistance costs, implementation, and training.

- Building HL7 interfaces with the hospitals, labs, etc.

- Clearer ideas of the State HIE plan.

- Don't need reimbursement decreased to providers to pay for all of this. If reimbursement rates are decreased we will no longer accept Medicaid or Medicare patients into our practice.

- HL7 Immunization Registry testing.

- Involvement in an HIE will only be if I can protect the identity of my patients.

- Listserv, newsletter.

- Lower bandwidth and development costs.

- Mental Health and Behavior Health (private sector) is severely neglected when it comes to EHRs.

- Recommendation on the best system or brief summary of the pros and cons of each system.

- Set standards that define the platform.

- Who will be the governing body for certification, and when will meaningful use be simplified for providers?

Nevada will be competing with other states for a finite pool of qualified HIT professionals, until a stable and sustainable statewide labor pool can be established.

In order for Nevada to expand HIT capacity, a labor pool of trained IT and HIT professionals is needed to service and maintain the necessary network systems, hardware and software to ensure EHR meaningful use, and to operate and maintain HIE systems.

Estimates based on data from the Bureau of Labor Statistics, Department of Education, and independent studies indicate a shortfall over the next five years of approximately 50,000 qualified HIT workers required to meet the needs of hospitals and physicians as they move to adopt certified EHRs. In collaboration with the National Science Foundation, Department of Education, and the Department of Labor, ONC designed the Health IT Workforce Development Program to assist in the training and assessment of qualified graduates, who will reduce the estimated shortfall by 85%. However, building a labor pool of sufficient size and with the necessary skill set will take time, making it difficult to achieve HITECH deadlines for EHR meaningful use. Also necessary is an interest in the part of high school students to pursue the required post-secondary education to qualify for these positions. Another factor is that the curriculum for such education programs must be developed, which also takes time to accomplish. Until such a stable and sustainable labor pool can be established, Nevada's HIT efforts might be delayed by a shortfall of HIT professionals.

## Theme 5: Stakeholder Awareness and Engagement

With the exception of those individuals and stakeholder groups that are involved in the HIT Blue Ribbon Task Force, awareness, understanding, and engagement of State level efforts with both HIT and HIE is very low.

Many of the participating providers and organizations interviewed said that contact through the assessment was the first outreach they had experienced regarding the State's HIT activities. Only 5% of survey respondents stated being very knowledgeable about what Nevada is doing in regards to HIE. In addition, 57% are not at all knowledgeable, while 38% are somewhat knowledgeable. The level of knowledge is also evident for other State agencies. Several DHHS divisions said they have just started to become involved. However, they are not well informed and are looking for guidance about how and when they should become more engaged. The survey results supported what focus group and interview participants reported.

While this finding is not surprising, given the early stages of the State level efforts to plan for adoption and implementation of EHR and HIE, it illustrates the amount of attention and effort that is needed for outreach if Nevada wants to increase EHR adoption and build the infrastructure to support HIE.

**Providers show some interest in getting involved in HIE-related planning activities.**

While there is limited overall awareness about what is happening with HIT and HIE activities in Nevada, about 60% of survey respondents indicated they are either very interested or somewhat interested in being involved in HIE planning activities. In addition, the majority of the participants in focus groups and interviews indicated a high level of interest in HIE-related activities and wanted to know more about what is happening at the State level. In fact, some of the participants who attended the focus groups were participating for the sole purpose of finding out what activities are happening related to HIT and HIE both at the State level and locally.

**Provider awareness of the value of EHR adoption as a means of streamlining business processes and creating more efficient health care practices may be confounded by a perceived emphasis on rules and regulations.**

While HIT and HIE adoption, as being pushed through the HITECH Act and subsequent rules from CMS and ONC, is expected to transform the provision of patient care through more informed clinical decisions and coordinated delivery across disparate providers, the delivery of this message has greatly deteriorated at the federal level to state stakeholders. To many providers, the message has been replaced by "requirements," "incentives," "reporting" and ultimately "disincentives."

Physicians participating in focus groups who have adopted EHR said one of the main reasons for doing so was to gain increased efficiency in operations and business practices. A consultant from HealthInsight who works with physicians on EHR adoption and implementation said the efficiencies physicians can gain when they implement EHR and redesign their business processes to take full advantage of the system's functionality can have as great if not greater impact on patient care than a single focus on adoption for meaningful use purposes alone.

## Theme 6: HIE Governance

**Despite the variance of adoption by provider types, there is some consistency in thinking around HIE models, HIE governance, and the role of the State.**

Assessment participants, for the most part, believe a public-private partnership model is the best governance model for the State of Nevada. They do not see any one entity having control of all pieces of an HIE and that the governance should be a collaborative effort involving a diversified group of stakeholders. In addition, stakeholders see the HIE structure as being a marketplace-driven approach that should be able to prove its value. As for the HIE model, a large number of assessment participants think the infrastructure should be the vehicle or bridge for supporting exchange, and do not favor a centralized repository for information. However, consumer stakeholders did not participate in this assessment, and their perspective may differ.

Many of the participants think the State should serve in an overarching regulatory role providing HIE oversight and standards setting, but the State should not have control over the infrastructure. In addition, many stakeholders think the State should establish a unique patient identifier. When asked about governance structure, many stakeholders mostly had questions. As an example, stakeholders wondered who would be responsible for ensuring data is shared to the minimum extent necessary and who would be responsible for ensuring data is de-identified for specific reporting purposes.

## 4.2    Geographical Distribution of Provider EHR Uses

The purpose of this section is to present data from the survey that shows the similarities and differences between urban and rural areas in the adoption and use of EHR. The urban vs. rural data was determined by matching the list of ZIP Codes with managed care regions in Nevada. By definitions established through Medicaid for the provision of services, areas of mandatory managed care are considered urban, while fee-for-service areas are considered rural.

Out of 364 survey responses received, 98, or just over one quarter of the respondents, were from rural providers (27%). Urban respondents represented 266, just under three quarters of the total survey response (73%).

**Figure 9 – Urban/Rural Breakdown of Respondents**
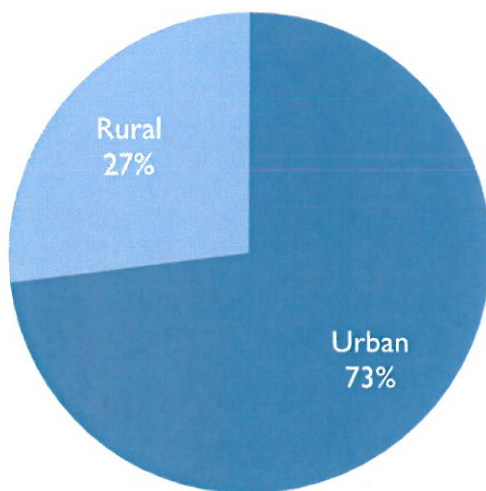


Overall, the survey responses show very few differences in adoption and use of EHR by geographic location. Urban and rural providers reported very similar uses of EHR, including the staff who use EHRs, charting, patient demographics, clinical decision support, and e-prescribing. Also, there were only minor differences between urban and rural providers in the practice and use of health information exchange. The following figures illustrate the differences in EHR adoption between urban and rural providers.

EHR Adoption

Figure 10 – Urban providers have slightly higher EHR adoption
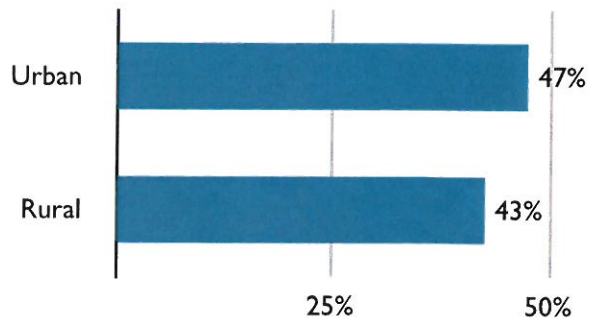


Figure 11 – But rural providers are more likely to implement within the next five years
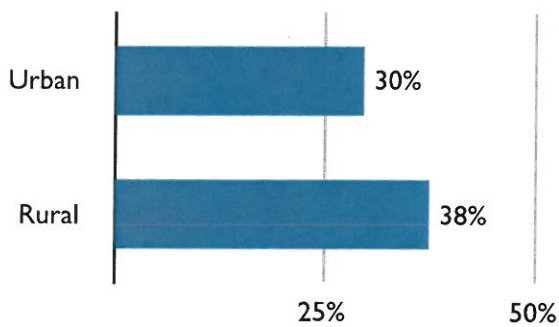


Staff Use of EHR

Both urban and rural providers who have an EHR reported high levels of EHR use by staff. There were also only minor differences in staff usage of EHR between urban and rural providers. 64% of all rural respondents report that 90% of provider and clinical staff currently use the EHR system, compared to 67% of urban providers responding to the same question. 12% of all providers reported that staff routinely use their EHR less than 25% of the time.

Paper vs. Electronic Charts

Figure 12 – Urban providers using EHRs are more likely to be entirely paperless
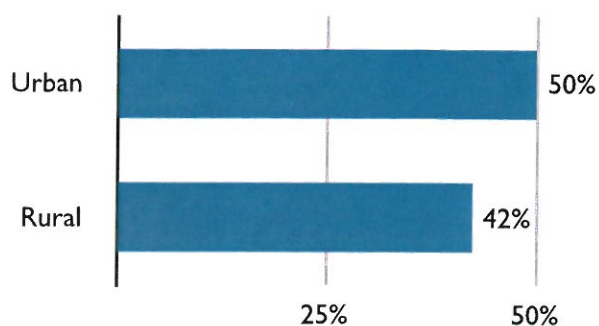


Figure 13 –In addition, EHR-using rural providers tend to maintain both electronic and paper records when compared to urban providers
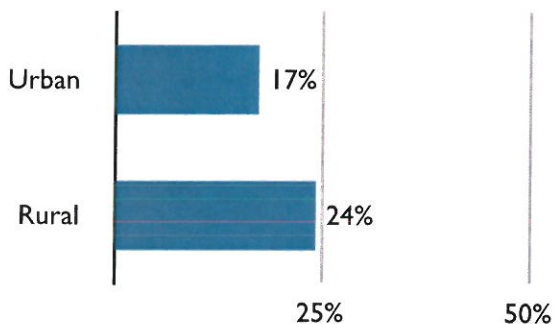


E-Prescribing

Urban and rural providers with EHRs participating in the survey described different capabilities in the area of e-prescribing.

- 86% of both urban and rural providers maintain active medication lists for patients in their EHR.

- Urban providers order medications by entering prescription information into an electronics system (EHR, Web site) to a greater extent than rural providers.

Urban — 70%
Rural — 57%
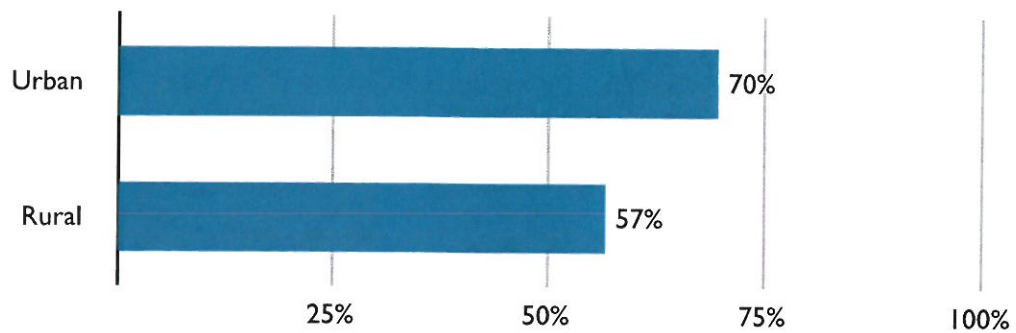
In addition, a higher percentage of rural providers do not use a system to support order of medication or prescribing.



Urban — 30%
Rural — 43%
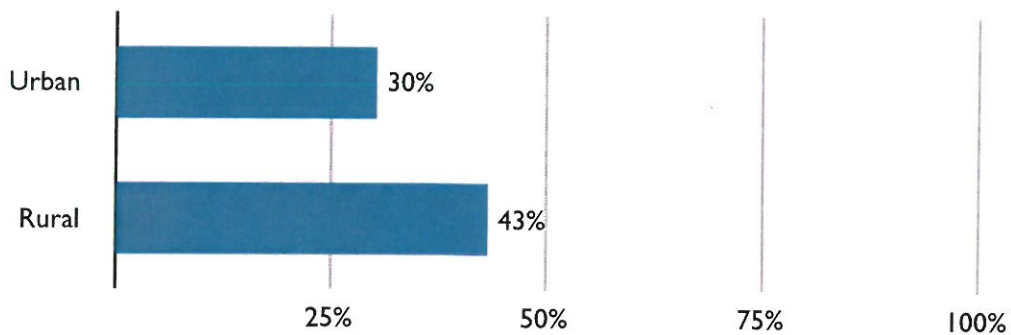
Rural providers are generating and transmitting permissible prescriptions electronically to a greater degree than urban providers.



Urban — 59%
Rural — 65%
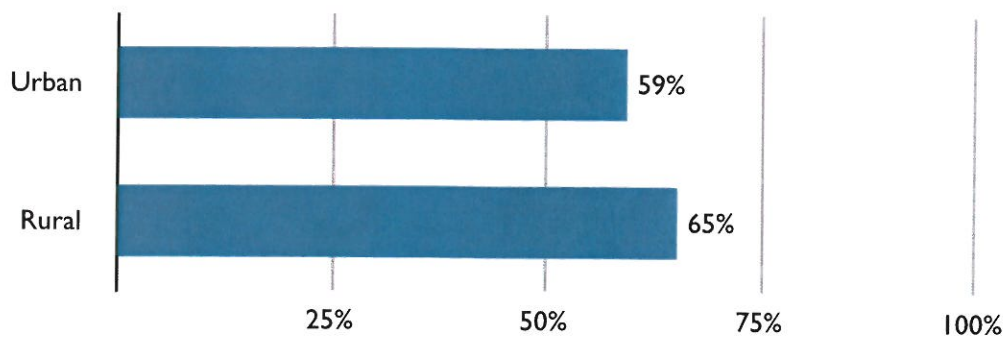
Rural providers are more likely to use the alerting capability of potential drug-to-drug and drug-allergy interactions at the time of the prescription.

| | | | | |
|---|---|---|---|---|
| Urban | | | 74% | |
| Rural | | | | 87% |
| | 25% | 50% | 75% | 100% |
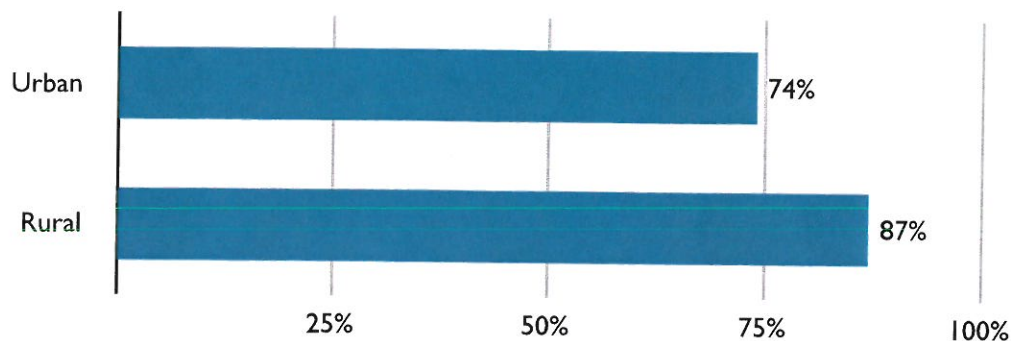
## Patient Demographics

In some cases, there are no material differences in capturing patient demographics between urban and rural providers.

- 92% of urban and rural providers are using their EHR to track and record patient demographic information and clinical documentation and notes.

- 70% of urban and rural providers are using their EHR to track and record external documents through an Electronic Document Management system.

Some of the key differences between urban and rural providers are:

- A greater percentage of rural providers are using their EHR to track and record active medication allergy lists, active medication lists, updated problems lists and vital signs for their patients.



| | | | | |
|---|---|---|---|---|
| Urban | | | 78% | |
| Rural | | | | 92% |
| | 25% | 50% | 75% | 100% |
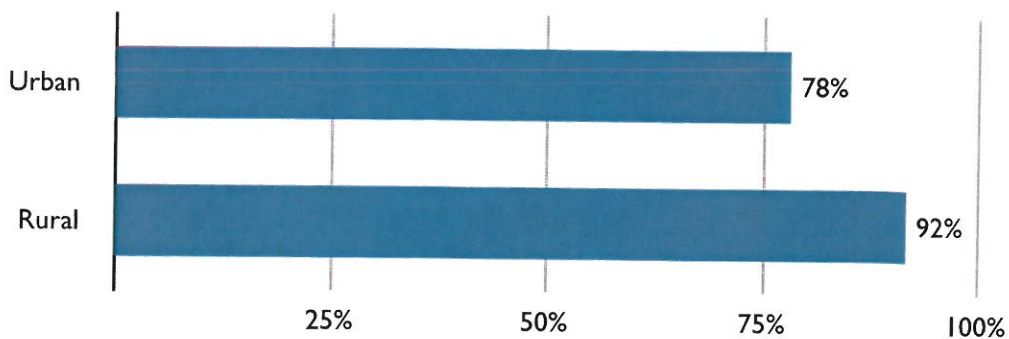
- More rural providers are also using their EHR to track and record tobacco use for patients 13 and older.
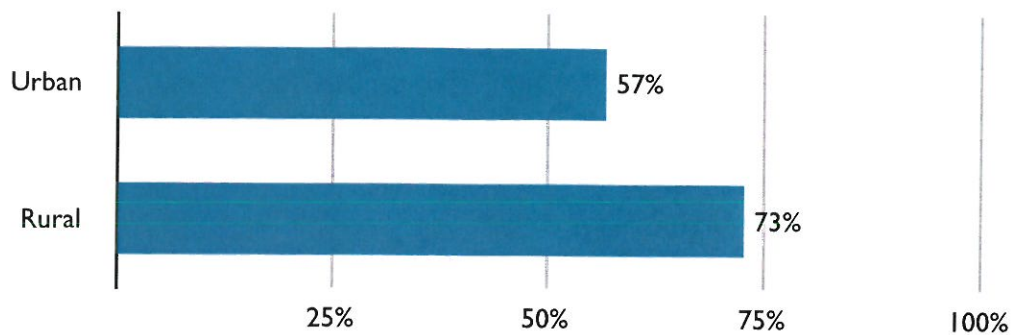
Clinical Decision Support

Figure 14 – Rural provider more likely to use Clinical Decision Support when it is available
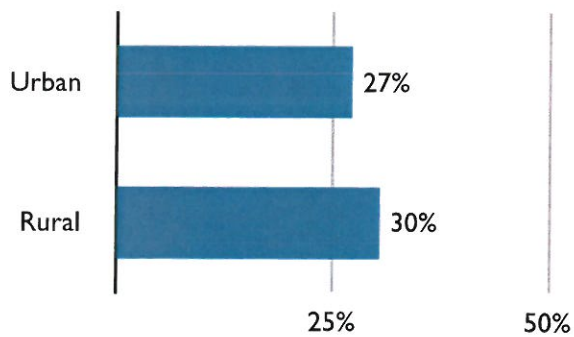


Figure 15 – Urban providers are more likely to have an EHR that does not have a Clinical Decision Support module
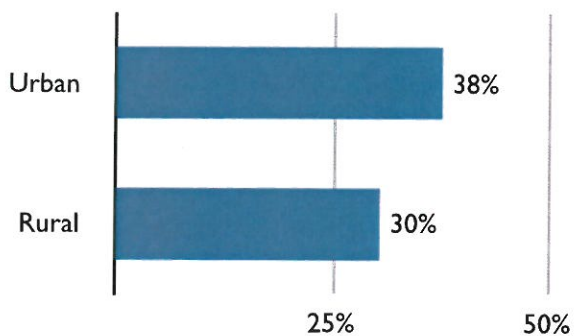


Health Information Exchange

A vast majority of all providers report that while they do not routinely exchange electronic patient data with other providers, they do exchange electronic patient claims-related data with health plans.

The survey results also indicate only minor differences between urban and rural providers in the electronic exchange of patient data, with urban providers indicating they receive data to a slightly greater extent than rural providers.

Figure 16 – Urban and rural providers routinely send electronic data for claims and billings at a similar rate
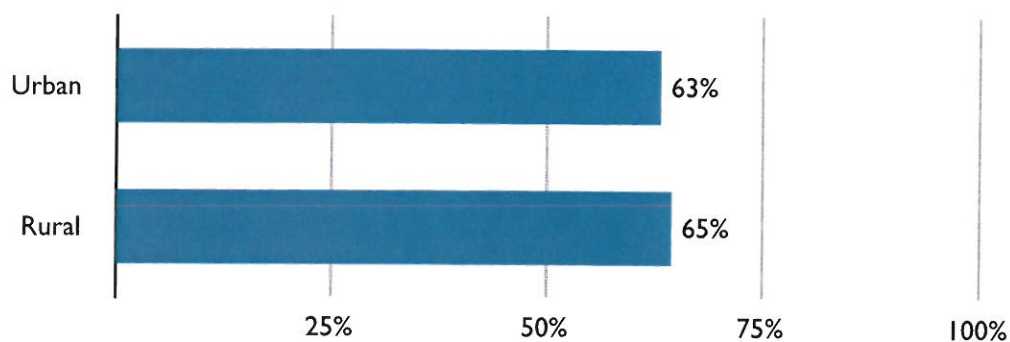


Figure 17 – However, rural providers receive claims and billing electronic data at a much lower rate
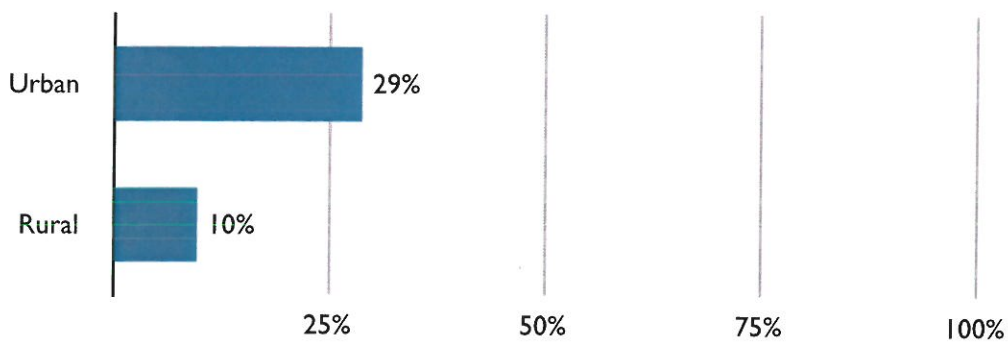


The only other category that shows exchange activity of greater than 25% is eligibility verification with health plans.

Figure 18 – Electronic eligibility verification is similar between urban and rural providers
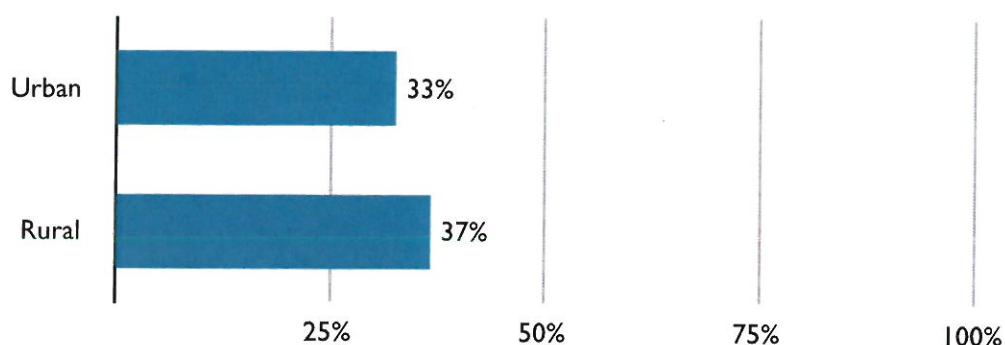


## 4.3    Current HIT and HIE Systems and Projects

This section describes representative projects and systems that were identified as part of this assessment based on stakeholder interviews, focus groups, and survey results. Appendix B contains more detailed information about identified projects and systems for both public agencies and selected providers. The information gained from the assessment is not comprehensive since not all providers and identified stakeholders could be contacted through the assessment. However, some State level systems that house or exchange clinical data that are potential candidates for participation in HIE in the future are addressed in this section and Appendix B. The list of projects does not address HIT and HIE systems and projects in health plans due to the fact that the HIT Assessment focuses on health care providers and clinical data reporting systems and secondly, there was limited health plan participation in the assessment. Overall, the projects have not been coordinated, nor is there much collaboration or continuity of efforts. Nevada's State HIT Coordinator will need to facilitate the coordination of these projects and systems.

### Medicaid Management Information System

DHCFP has made an Intent to Award to Hewlett Packard for the takeover of the current MMIS (RFP No. 1824). As part of this procurement, DHCFP was looking for a system that would allow for greater alignment with the Medicaid Information Technology Architecture (MITA) framework. The current MMIS does support standardized HIPAA compliant Electronic Data Interchange (EDI) transactions for eligibility inquiries, claims processing, prior authorizations, and other administrative transactions. In addition, the MMIS has various peripheral systems to support exchange, including an e-prescribing system, but use of the e-prescribing system is reportedly low.

DHCFP is also hoping to obtain a scalable HIE solution as part of the procurement for the MMIS Takeover. Depending on the HIE solution being provided by the awarded vendor, the solution may be integrated into the statewide HIE infrastructure. More information regarding the solution will be

provided to stakeholders once a contract is in place with the awarded vendor; such information is expected to be available by the fall of 2010.

In addition, DHCFP is initiating planning for the replacement of the MMIS. The ability to reach further MITA maturity levels and to expand HIE capacities could be accomplished through the replacement of the MMIS. The MMIS replacement is being planned for 2012.

## Immunization Registry

Nevada WebIZ is a web-based immunization registry system managed by the Nevada State Health Division. Both public and private sector participants can access the registry through its Web platform. "Nevada WebIZ currently contains over 1.9 million records, including over 160,000 records with two or more vaccinations for children age 0–6 years. At present, there are nearly 600 public and private organizations, including physicians, health districts, community health nurses and school districts that have access to view, create and update immunization records for Nevada's children."[6]  The registry does not have the ability to transmit data electronically to the Centers for Disease Control and Prevention (CDC) due to funding limitations.

The State Health Division is working on a pilot to support Health Level Seven[7] (HL7) interfacing with selected providers for the immunization reporting. The ability to expand the pilot would entail resources for both the State and participating providers to ensure the necessary interfaces are functioning.

There are also plans to interface with the electronic vital records system, which stores birth records, and enables auto-population of the immunization registry with relevant birth data.

## Public Health Surveillance and Reporting

There are various systems in Nevada at the State level for the purposes of public health surveillance and reporting. Some of the systems are simple databases, some are web-based, and some have been built and maintained by vendors. In addition, in many cases, Nevada DHHS may report to the CDC and other federal oversight agencies by leveraging systems provided by the federal agencies. The list of Nevada DHHS systems identified through this assessment can be found in Appendix B.

## University of Nevada HIT and HIE projects

The University of Nevada has several different HIT-related projects that may enable them to participate in statewide HIE, including the following:

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[6] http://health.nv.gov/Immunization_WebIZ_Info.htm

[7] Health Level Seven International (HL7) is a not-for-profit, ANSI-accredited standards developing organization dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services.

- **The Center for Health Information and Analysis (CHIA)** has a database of inpatient hospital medical claims for Nevada hospitals and is also developing web-based quality reporting capabilities for hospital and outpatient services. The inpatient hospital claims could potentially be integrated with Medicaid data through the potential HIE solution as part of the MMIS Takeover Project.

- **The Center for Health Statistics and Informatics** has a statewide autism database.

- **The School of Dentistry** has a comprehensive EHR and operates in a paperless environment.

- **The School of Medicine** has partnered with other organizations for HIT-related efforts. The School has telemedicine resources. The nursing clinic in the Reno area uses a cloud-based EHR called Practice Fusion. University Medical Center/University of Nevada School of Medicine, Neurology has an EHR that is used for some functions, but paper is the primary source of medical records. The School of Medicine is in a position to implement a comprehensive EHR which would bring together those departments and clinics that currently have some form of an EHR with those that do not have an EHR, such as the Department of Pediatrics, based on conversations with IT leaders. However, the State's budget crisis may delay the adoption of an EHR system.

## Nevada Rural Hospital Partners

The Nevada Rural Hospital Partners (NRHP) is an alliance of 14 small and rural hospitals, which has been working to increase access to care in rural parts of the State. NRHP is coordinating with providers in rural Nevada to improve HIT and HIE through the following means:

- **Supporting Telemedicine and Continuing Education through a Wide Area Network** – NRHP created a Wide Area Network for rural Nevada in 2001, which supports a secure network for sharing tele-health service, including tele-radiology. With this network, rural hospitals are connected with offsite radiologists 24 hours a day, seven days a week. In addition, providers can connect to continuing medical education programs broadcast on the network between 56 community sites.

- **Archiving Data for Providers** – NRHP maintains a HIPAA compliant, electronic data archive, which allows providers to store data offsite.

- **Assisting Providers with Maintaining Electronic Health Records** – NRHP provided seven hospitals with equipment and software for integrating patient information with diagnostic digital images. This information is being maintained in a centralized information system for easy storage and retrieval. NRHP is working with other sites to improve radiology information system and electronic network capabilities.

- **Support Health Level Seven Data Exchange** – NRHP invested in an interface engine allowing for HL7 formatted data exchange between 17 disparate systems.

## Use of EHRs by Veterans Affairs in Nevada

The Nevada Office of Veterans Services serves over 339,000 veterans living in the State. There are two main service offices, in Reno and Las Vegas, and the Nevada Veterans Home located in Boulder City. The Nevada State Veterans Home receives support from the U.S. Department of Veterans Affairs but is a state-owned and operated facility able to accommodate 180 residents.[8]

This assessment includes information gathered through various focus group participants about the Veterans Administration EHR systems. Additionally, this assessment includes survey information about the system at the Nevada Veterans Home.

As a federally funded and operated organization, the Veterans Administration is advanced in its operation and adoption of EHR by comparison to other providers in Nevada. Their EHR, Veterans Health Information System and Technology Architecture (VistA), is based on an open source code and is publicly available. VistA is built on a client-server architecture, which ties together workstations and personal computers with graphical user interfaces at Veterans Health Administration (VHA) facilities, as well as software developed by the local organization. The EHR is used for a majority of organizational functions and the organization is virtually paperless. The EHR is used for progress notes and everything including electronic imaging, records scanning, and bar code medication. Additionally, it is a national system with robust information exchange between the 150 VA centers nationwide. VistA can support a large variety of clinical settings and medical care delivery systems.

The Veterans Home uses an EHR system by ADL Data Systems that provides an integrated electronic medical record. The EHR is used for patient demographic information, clinical documentation and notes, external documents through an Electronic Document Management System, an active medication list and vital signs. A Computerized Provider Order Entry is also used for lab orders, test orders, medication orders, referral orders and rehab, code status, and admission specific orders. The EHR does allow for and is used to track care plans and employ role-based access to EHR functions. In terms of HIE, the Veterans Home primarily sends information to health plans for claims and billing.

A recent congressional directive has required the Veterans Administration and Department of Defense to share records in order to provide for the seamless care of soldiers as they transition from active duty to the VA system. At the moment, in Nevada, this involves links between the VA's Computerized Patient Records System (CPRS) and VistA systems and the Air Force Composite Health Care System (CHCS) and Armed Forces Health Longitudinal Technology Application (AHLTA) systems. For this exchange, the VA and the Air Force's Mike O'Callaghan Federal Hospital have a direct connection temporarily. However, a "business gateway" is being developed to centralize control and operation of this exchange at the federal level.

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[8] Taken from the Nevada Office of Veterans Services website last accessed July 1, 2010: http://www.veterans.nv.gov/about.html

## Indian Health Clinics

Most Indian Health Clinics in Nevada use the Resource and Patient Management System (RPMS). RPMS is the national Indian Health Services (IHS) EHR, which is undergoing enhancements to meet meaningful use criteria. Enhancements planned through ARRA include:

- Expand use of the RPMS EHR including clinical care, support services, and practice management comprehensive health information, provider order entry, and clinical decision support.

- Provide quality and performance reporting that is transparent and accessible to IHS consumers.

- Ensure RPMS meets national interoperability standards in order to participate in health information exchanges such as the NHIN.

- Ensure the RPMS EHR receives certifications for ambulatory, inpatient, and behavioral health care.

## Federal Grant-Funded Projects

Nevada has received grant funds to support the development of HIT and HIE infrastructure through Health Resources Services Administration (HRSA), ARRA (in addition to the HIE Cooperative Agreement Grant), and other grants. Some of these grants have been more recent than others. This includes the following grants:

- **Rural Telephone Company, NV (ARRA Broadband Grant, July 2010)** – This $2.4 million grant/loan project will extend ADSL2+ high speed broadband service to existing and new customers in the North Fork, Tuscarora, and Jarbidge, Nevada service areas. Rural Telephone Company estimates that approximately 700 people stand to benefit from this project as well as over 100 businesses and 10 other community institutions. Not only will this project create jobs upfront, but it will help drive economic development in the community that will create jobs for years to come.

- **Nevada Department of Cultural Affairs, NV (ARRA Broadband Grant, July 2010)** – This $806,000 grant with an additional $305,000 applicant-provided match will install more than 250 new workstations and expand the training and educational capacity at more than 30 libraries and other hubs for free computer access in 15 counties throughout the State.

- **College of Southern Nevada (ARRA HITECH HIT Education Grant, April 2010)** – The U.S. Department of Health and Human Services (HHS) provided a $5.4 million grant to a consortium of 14 colleges in California, Hawaii, Arizona and Nevada. The College of Southern Nevada is part of this consortium and will be providing training and education on HIT. If extended into a second year as expected, the grant would provide an additional $5.35 million for a total allocation of $10.75 million. "The grant is designed to get people trained

quickly in the kind of computerized health information systems that are being installed by hospitals and medical offices across the western states."[9]

- **Nevada Health Centers Grants (HIT and EHR, 2007)** – Nevada Health Centers, Inc. (NVHC) is a private, non-profit Federally-Qualified Health Center serving Nevada's medically underserved populations. NVHC presently has over 30 medical and dental centers, including rural health clinics, and other health related programs. Nevada Health Centers received a $1.4 million grant through HRSA (and a grant through the Lincy Foundation) to support implementation of a full EHR system. A comprehensive EHR system has been operational in NVHC clinics since May 2009.

- **Nevada Rural Hospital Partners Foundation (Telehealth Grant, 2004)** – NRHP received a grant for Digital Imaging System for Rural Nevada (DISRN)[10] Telehealth. The DISRN program enables rural and frontier hospitals to capture digital radiographic images, implement Picture Archive Computer Systems, integrate patient information with those diagnostic images, and transmit them over an existing, secure wide area network to a new shared, centralized image archive. While initially focused on radiology, the system will support any type of digital diagnostic image. The program enhances access by rural physicians to virtually instant diagnostic support across great geographic distance, and is a dynamic example of how small, autonomous hospitals can share technology to reduce cost, improve quality, and increase workforce productivity. In addition, the Nevada Hospital Association and the Nevada Rural Hospital Partners applied for ARRA grant funding to support broadband access to rural health care providers, but the funding was not awarded.

## 4.4    Identified HIT and HIE Stakeholders

### Engaged Stakeholders

This section highlights the stakeholders identified through the HIT Assessment for Nevada's HIT and HIE planning efforts. Because of the size and breadth of the Nevada health care stakeholder community, not every HIT and HIE stakeholder is specifically addressed in this report. Included below are the stakeholder groups that were identified for outreach, communications, interviews, focus groups, surveys, and ongoing participation in planning. Additional breakouts of stakeholders are included in Appendix C of this report.

### Identified Stakeholders Groups

- All licensed health care providers in Nevada and health care providers in other states serving Nevada consumers

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[9] http://www.losrios.edu/downloads/press/04-07-10_HHSGrant.pdf

[10] http://www.hrsa.gov/telehealth/granteedirectory/organizations.htm

- All health care consumers in Nevada

- Associations, consortiums, and work groups

- All health plans in Nevada, including managed care plans

- State, county, and local government agencies

- All military and Veterans' Affairs

- Universities and colleges

- HIT and HIE vendors

- Indian health clinics

- Indian tribes

- Indian Health Board of Nevada

- Nevada's Regional Extension Center (HealthInsight)

- Federal oversight agencies, including HHS, CMS, and ONC

- National Health Information Network[11]

- Department of Defense

- Centers for Disease Control and Prevention

- Lobbyists and advocates

## Stakeholder Outreach

Prior to this HIT Assessment, there had been fragmented outreach to providers and other stakeholders in the Nevada health care community about State level HIT and HIE planning efforts. Most of the effort to build awareness to date has been carried out through the HIT Blue Ribbon Task Force, existing member communication channels by the provider associations and stakeholders that are represented on the HIT Blue Ribbon Task Force.

The outreach conducted to invite and encourage provider participation in the HIT Assessment generated a greater level of awareness and understanding than had existed before. Many providers who participated in the assessment focus groups and interviews said they were hearing about State level HIT and HIE planning efforts for the very first time. Several provider associations that had not been engaged in HIT and HIE planning activities began promoting awareness within their organizations by distributing the fact sheet that was prepared to describe State level planning activities and posting a link to the EHR and HIE adoption survey on their Web sites.

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[11] Nationwide Health Information Network (NHIN) is operating as the NHIN Exchange. This Exchange connects a diverse set of federal agencies and private organizations that need to securely exchange electronic health information. These entities currently include the Social Security Administration (SSA), MedVirginia, the Department of Veterans Affairs (VA), the Department of Defense (DoD), Centers for Disease Control and Prevention, (CDC) and Kaiser Permanente.

At the same time, increased awareness did not necessarily translate into increased engagement. In reviewing data from provider groups that were included in outreach efforts related to the HIT Assessment, several conclusions can be drawn about the needs of different stakeholder groups for outreach and engagement:

- Many hospitals are already highly engaged, although additional outreach for specific hospitals is needed. While significant outreach is not needed for this group, there should be a focus on ongoing communication.

- While there is some physician engagement, physicians need more information about meaningful use and technical assistance for EHR planning and implementation. They need more channels through which to receive information about State level efforts and more opportunities to participate in the planning process.

- Nurses have increased engagement in State level efforts, primarily through the Nevada Nurses Association. There is fairly high interest by members of this organization as shown by their participation in focus groups and the promotion of the HIT Assessment survey on their Web site. Including this group as part of continued provider outreach is important.

- Professional associations representing ancillary health care services need significant outreach and education to build their awareness and understanding. They have a stake in HIT and HIE planning, and they are not yet engaged at a level where they can help shape the future of HIT utilization in Nevada. Because these providers know the least about State level HIT and HIE planning efforts, personal communication and one-to-one contact with their representative associations may be the most effective beginning point.

- While initial outreach has been conducted with the Nevada Dental Association, the Nevada Occupational Therapy Association, the Nevada Physical Therapy Association, the Nevada Association of Medical Products Suppliers, the Nevada Chiropractic Association, the Nevada Emergency Medical Association, the Nevada Speech-Language and Hearing Association, the Nevada Ambulatory Surgery Center Association, and the Nevada Pharmacy Association, none of these important stakeholders are significantly engaged. However, many providers in these groups responded to the survey. Outreach efforts should be focused on involving these groups in State level HIT and HIE planning activities.

- State and local agencies, particularly DHHS divisions and county health departments directly involved in providing medical care to patients need more information about their role and the State's expectations for their participation in HIT and HIE planning efforts.

## 4.5    Integration of HIT Planning with Other Medicaid Initiatives

The DHCFP HIT Project Staff are using Medicaid Information Technology Architecture (MITA) principles in its approach for developing the SMHP. MITA stresses many of the same service-oriented architecture principles as HIT and HIE, such as reusability and interoperability.

In February 2009, DHCFP completed a MITA state self-assessment that provided a snapshot of the current Medicaid-related business processes and supporting technology. The state self-assessment identified areas where changes can be made to support improvements in Nevada's Medicaid program. The MITA Self-Assessment generally shows that maturity levels are low to medium, and through the MMIS Takeover and eventually the MMIS replacement, higher levels of maturity are expected to be achieved.

In alignment with the Medicaid vision for MITA, DHCFP is seeking to replace the MMIS to obtain a MITA-aligned and HIPAA compliant system, which will aid in exchanging and managing electronic health information. DHCFP intends to initiate planning activities for the MMIS replacement in 2012. In the interim, as part of the current MMIS Takeover procurement, DHCFP is seeking peripheral systems and tools to increase alignment with MITA. This includes the potential for a new decision support system, an HIE solution, and an e-prescribing tool. DHCFP is requesting a scalable HIE solution, so that it may also serve as the statewide HIE platform. Initially the HIE platform will be used to share claims information and related data with provider EHRs. This platform will assist eligible Medicaid providers in meeting meaningful use criteria.

## 4.6 Implications of State Rules and Regulations on HIE Strategic and Operational Plan and SMHP

Per the State HIE Cooperative Agreement requirements, OHIT is preparing a State policy and regulatory inventory to assess the regulatory impact of HITECH requirements, and to identify possible State legislation that may be required. This includes enabling HIE, facilitating EHR adoption, and protecting personal health information. DHCFP should be able to leverage this information for implications on the SMHP. The assessment is currently in progress, and its results will be incorporated into the Nevada HIT Strategic and Operational Plan, and can be incorporated into the SMHP.

# 5    Conclusions and Next Steps

## 5.1    Implications of Findings

This section describes the implications of the assessment, how the current environment influences the development and implementation of the State's EHR Incentive Program, recommendations for advancing EHR adoption and HIE engagement, and suggested next steps for the Department of Health Care Financing and Policy and the Office of Health Information Technology in support of Nevada's State level HIT and HIE efforts.

The following chart presents the assessment findings, detailed in Section 4.1, and the implications of those findings on advancing E-Health in Nevada.

## Theme 1:  Current Uses of EHR Systems

| Findings | Implications |
|---|---|
| Many of the providers reached through the assessment show an interest in increasing adoption, despite the numerous barriers that exist. | By continuing to engage stakeholders the State could continue the momentum towards interest in EHR adoption. In addition, the State should be able to better measure increasing adoption rates through annual or mid-year surveys or assessments. |
| Providers with EHRs report using a broad range of EHR functionalities. | Despite the broad range of reported uses, providers do not consistently use EHRs. Desired outcomes from EHRs may fall short of expectations unless providers demonstrate greater adoption. |

## Theme 2:  Direction for EHR Adoption and HIE Utilization

| Findings | Implications |
|---|---|
| The EHR adoption levels vary by provider type with the large hospitals and large physician practices reporting higher levels of EHR adoption compared to other providers. | It will be difficult to establish statewide HIE until more providers adopt EHR systems that meet certification criteria and have capabilities to exchange clinical data. |

| Findings | Implications |
|---|---|
| There is a lack of exchange of health information occurring in the Nevada health care system outside of a provider's or stakeholder's network. | Lack of existing collaborative exchanges between provider systems or networks will make it more difficult to link together the providers and health care organizations that are needed to create a broader, more integrated regional or statewide HIE. |
| Large hospitals, large networks of providers, and other providers that have consciously advanced their EHR capacity ahead of the legislation are the primary providers who have some level of readiness and capacity to participate in an HIE. | It will be difficult to establish statewide HIE until a broader range of providers demonstrate greater readiness. |

## Theme 3: Meaningful Use and Incentive Payments

| Findings | Implications |
|---|---|
| Many providers are still unsure about whether or not they will apply for the incentive payments. | A significant number of providers may not meet the required Medicaid or Medicare patient volumes, and will be ineligible for incentive payments. This could result in decisions not to adopt EHR systems in the next five years. |
| Providers will have difficulty meeting the proposed meaningful use criteria in a timely manner. | Providers may need additional assistance and guidance to ensure they meet the criteria. Statewide HIE infrastructure will be necessary to ensure providers can meet meaningful use by 2015. Also, auditing functions will be critical to ensure participating providers are actually meeting criteria. |

## Theme 4: Barriers to Advancing EHR Adoption and HIE Utilization

| Findings | Implications |
|---|---|
| The most significant barrier to implementing, adopting and enhancing EHRs is cost. | Without adequate financial support, providers may not be able to implement EHRs or enhance their existing EHRs to meet the meaningful use criteria and to support the advancement of HIE. |
| Providers are overwhelmed by the number of options for EHRs and the effort required to implement or enhance systems within the timelines established at the federal level. | With so many options providers are apprehensive to adopt a system that may not meet their needs. |
| Providers are hesitant to engage in HIE due to patient privacy and security concerns. | HIE efforts will fall short without provider confidence that the necessary policies, legislation and technological safeguards are in place to ensure safe, secure HIE and protection of personal health information. |
| Most stakeholders know little about HIE, including technical infrastructure and recognized standards. | The capabilities to implement HIE across disparate organizations will be limited without additional guidance at the State level. |
| Many providers are in "wait and see" mode for further investments in EHRs and HIE due to uncertainty around the details of costs for participation in HIE and integration with a statewide infrastructure. | The abilities to implement HIE across disparate organizations will be limited without additional information on cost and technical infrastructure. |
| Nevada will be competing with other states for a finite nationwide pool of qualified HIT professionals, until a stable and sustainable labor pool can be established. | The abilities to increase EHR adoption and establish statewide HIE will be hindered without sufficient HIT professionals. |

## Theme 5: Stakeholder Awareness and Engagement

| Findings | Implications |
|---|---|
| With the exception of those stakeholder representatives that are involved in the HIT Blue Ribbon Task Force, awareness, understanding, and engagement in State level efforts are very low. | The lack of awareness for the initial planning may prevent providers from engaging at a later date. |
| Providers show some interest in getting involved in HIE-related planning activities. | Because the concept and value of HIE is understood and appreciated by providers, there is support for initiating more broad-based HIE efforts in the State. |
| Provider awareness of the value of EHR adoption as a means of streamlining business processes and creating more efficient health care practices may be confounded by a perceived emphasis on rules and regulations. | There are missed opportunities for greater adoption of EHRs among providers who will not qualify for incentive payments. |

## Theme 6: HIE Governance

| Findings | Implications |
|---|---|
| Despite the variance of adoption by provider types, there is some consistency in thinking around HIE models, HIE governance, and the role of the State. | There is a foundation for developing a consensus vision and approach for moving HIE forward. Areas where consistency and shared vision are evident should be leveraged to demonstrate success. |

## 5.2  Conclusions

The data collected as part of this assessment shows a significant level of EHR adoption and HIE utilization in some sectors of the provider community, and also in government agencies such as the military and State agencies directly involve in providing health care services to the public. These

activities include information development and support for EHR and other HIT tools; efforts to convene, organize, and coordinate HIT initiatives; information technology modernization and development; advancement of EHR systems with a goal of achieving meaningful use; and HIE and interoperability capacity-building.

There are many challenges facing Nevada's health care community as it works to implement the complex technological innovations that are part of advancing HIT and HIE in the State. These challenges relate to organizing and structuring both HIT and electronic HIE initiatives within the State's complex and varied health care marketplaces, promoting interoperability across all stakeholders, and providing financial and other resources for support of these technologies and their sustainability over time. Specifically, the assessment points to the following challenges that must be addressed in order to advance HIT and HIE:

- Lack of current adoption by some providers, including many rural and small hospitals and small provider practices outside of large health care systems.

- Lack of EHR functionality to meet meaningful use criteria.

- Lack of funding to modernize existing systems.

- Lack of funding to support resources for developing statewide infrastructure.

- Perceived and real legal and regulatory issues regarding data sharing, privacy of information and personal health information protection.

- Lack of understanding of HIE recognized standards and technical infrastructure.

- Lack of adequate participation from and communication among all of the stakeholders that need to be involved in HIT and HIE activities.

## 5.3    Recommendations

Recommendations related to the findings and conclusions of this assessment have been developed and are included in this section. The recommendations are intended to provide tangible and deliberate steps that the State may choose to pursue in order to continue its HIT and HIE efforts for Nevada providers, patients, and other stakeholders. It should be noted that such recommendations should be assessed by the State entities involved with HIT, including the Blue Ribbon Task Force, OHIT, and DHCFP, in order to determine how to proceed.

## Recommendation 1:  Expand current outreach efforts with stakeholders

While the State has done some HIT outreach, many stakeholders are still not aware of State level HIT planning efforts. To achieve greater awareness and engagement, the State may consider expanding outreach efforts with stakeholders, including those who are already engaged in State level HIT planning efforts, those who are prepared for growing HIT adoption, and those that have not been engaged in the State's HIT planning efforts, such as consumers and ancillary service providers.

However, such outreach requires resources, and the State's budget crisis may be a major obstacle. Below are suggested outreach activities for both State level HIE planning efforts and for DHCFP's EHR Incentive Program planning efforts. The State should also determine if some outreach activities could be conducted jointly by DHCFP and OHIT for greater effectiveness.

| DHCFP | State Level HIE |
|---|---|
| Provide educational information on HIT resources available for providers, including information on Nevada's Regional Extension Center, CMS' Web site for questions and answers regarding the EHR Incentive Program, and other resources. | Conduct outreach with consumers who have not been engaged in State Level HIE planning efforts to-date. |
| Provide information to providers on the timeline and planned next steps for the State's EHR Incentive Program. This will help keep providers abreast of the program, which will hopefully encourage participation. | Conduct outreach with stakeholders that have had minimal engagement in planning activities, including ancillary service providers and health plans. |
| Provide guidance on the State's EHR Incentive Program. Customize outreach based on areas that constitute the greatest gaps in EHR uses, such as immunization reporting, clinical decision support, and public health reporting. | Continue to engage stakeholders that have already been involved with the State's HIE planning efforts. |

As part of this assessment, stakeholder contact information including email addresses, has been obtained. The State could utilize email and Listservs to inform the stakeholders of where they can go for more information (like the Nevada HIT Web site) and the implications of the State's programs on their organization.

## Recommendation 2: Consider conducting visioning and strategic planning with representative stakeholders

DHCFP and OHIT, either jointly or separately, should consider conducting visioning sessions with key stakeholders on a regional level to ensure participation by stakeholders in dispersed geographic

locations of Nevada, including Las Vegas, Reno, and rural areas. Expanding EHR adoption and HIE utilization by a broad range of stakeholders are integral to making long-term intrastate and interstate HIE, and, eventually, national participation in HIE successful. This will help provide more comprehensive input to the SMHP and the State level HIE efforts. The visioning and strategic planning sessions should be scheduled in the near future to ensure appropriate engagement of stakeholders.

## Recommendation 3: Take incremental steps towards statewide HIE implementation

Best practices suggest that states consider taking an incremental approach to HIE implementation, rather than attempting a full-scale implementation of a fully integrated statewide exchange. The following suggested steps derived from the Thomson Reuters white paper "Statewide Health Information Exchange: Best Practice Insights from the Field" may be useful for Nevada:

- **Get one small HIE project in operation.** Even after years of planning, many states have not succeeded with implementing statewide HIE. The State should consider implementing a pilot HIE project with providers that have demonstrated HIE readiness. As an example, there are several hospitals that meet the litmus test for readiness. It makes more sense to launch something small, manageable, and affordable that provides the infrastructure and proven results for long-term planning.

- **Engage clinicians and physicians in planning.** Work directly with the clinicians and physicians, not just IT staff, to ensure their support and participation in planning. In addition, engage those physicians and other providers that are willing to serve in a pilot.

- **Focus on clinical use first.** The dominant objective of the HIE network should be to provide information that leads to better outcomes for patients. This is the foundation that all stakeholders embrace. Physicians need to know that it is valuable enough for them to participate. If there is little or no clinical value, physicians are not as likely to embrace it.

## Recommendation 4: Consider providing additional incentives to providers to encourage participation in the Medicaid EHR Incentive Program

Since the assessment findings illustrate that providers will have difficulties meeting Medicaid eligibility criteria and meaningful use, the State should determine if additional incentives or resources could be granted to providers. Providers may fall short of the requirements and fail to implement and adopt EHRs, which has a domino effect on Medicaid's HIT efforts, statewide HIE, and national HIE. If providers are further incentivized, they might be more likely to adopt EHR systems.

## Recommendation 5: Start assessing current audit processes and functions to leverage for the EHR Incentive Program

CMS' Final Rule for the EHR Incentive Program and other CMS guidance put the responsibility for auditing functions on the states. Given the gaps being reported by providers in how they use EHRs in comparison to meaningful use criteria, accurate reporting and auditing will be a crucial function to ensure payments are distributed accurately. CMS stated that states are responsible for the recoupment process for erroneous payments. Based on this, it would seem important for DHCFP to begin assessing what existing audit and program integrity functions could be leveraged and expanded for the incentive program.

## 5.4    Next Steps for DHCFP and OHIT

This assessment consolidates input from a variety of data sources and stakeholders. While this information alone is not sufficient to make decisions about how to structure and advance the State's HIT initiatives, it provides some understanding and insight into stakeholder readiness for furthering EHR adoption and HIE utilization. Below are suggested next steps:

- Present summary-level findings and potential implications to the HIT Blue Ribbon Task Force for discussion and recommendations to DHHS.

- Finalize HIT Assessment results for input into the SMHP and the HIT Strategic and Operational Plan.

- Post the HIT Assessment Final Report on the DHHS HIT Web site and notify stakeholders of its availability.

- Continue with planning and outreach efforts for the SMHP and the Strategic and Operational Plan.

# Appendix A – Glossary of Terms

| | |
|---|---|
| **Active Medication Allergy List** | A list of a patient's known or reported allergies to medications especially any that may impact current health status. |
| **Active Medication List** | A list of a patient's known or reported list of medications (including over-the-counter medications) especially any that may impact current health status. |
| **After-visit Clinical Summaries** | Patient information containing updated medication lists, lab and test orders, procedures, and instructions based on clinical discussions taking place during a patient visit. |
| **Care Plans** | Written documents for certain chronic conditions requiring advanced management. Care plans are developed with the patient and guide care management by outlining risks, goals, prevention, and actions for treatment (e.g. an asthma action plan). |
| **Certification Commission for Health care Information Technology (CCHIT)** | A voluntary, private-sector organization launched in 2004 to certify health information technology (HIT) products such as electronic health records and the networks over which they interoperate. See www.cchit.org. |
| **Clinical Data Repository (CDR)** | A clinical data repository (CDR) is a real-time database that consolidates data from a variety of clinical sources to present a unified view of a single patient. It is optimized to allow clinicians to retrieve data for a single patient rather than to identify a population of patients with common characteristics or to facilitate the management of a specific clinical department. Typical data types which are often found within a CDR include: clinical laboratory test results, patient demographics, pharmacy information, radiology reports and images, pathology reports, hospital admission/discharge/transfer dates, ICD-9 codes, discharge summaries, and progress notes. |

| | |
|---|---|
| Clinical Data Warehouse (CDW) | Similar to a CDR, but with more sophisticated data analysis and querying capabilities. |
| Clinical Decision Support (CDS) | Clinical decision support systems (CDSS) assist a provider in applying new information to patient care and help to prevent medical errors and improve patient safety. Many of these systems include computer-based programs that analyze information entered by the physician. Also see Clinical Decision Support Tools below. |
| Clinical Decision Support Tools | Clinical decision support tools are health information technology functions that build on the foundation of an electronic health record (EHR) to provide persons involved in patient care with general and patient-specific information that is intelligently filtered and organized to enhance patient health. Also see Clinical Decision Support (CDS) above. |
| Computerized Provider Order Entry (CPOE) | A computer application that allows a physician's orders for diagnostic and treatment services (such as medications, laboratory, and other tests) to be entered electronically instead of being recorded on order sheets or prescription pads. The computer has the ability to compare the order against standards for dosing, checks for allergies or interactions with other medications, and warns the physician about potential problems. |
| Electronic Health Record (EHR) | An electronic record of health-related information regarding an individual that conforms to nationally recognized interoperability standards and that can be created, managed, and consulted by authorized clinicians and staff across more than one health care organization. For purposes of this assessment, this definition is the same as an Electronic Medical Record (EMR). |
| Electronic Health Record (EHR) Certification for meaningful use | The certification of a provider's EHR according to meaningful use by an Office of the National Coordinator for Health Information Technology-Authorized Testing and Certification Body (ONC-ATCB). |

| | |
|---|---|
| Electronic Medical Record (EMR) | An electronic record of health-related information regarding an individual that conforms to nationally recognized interoperability standards and that can be created, gathered, managed, and consulted by authorized clinicians and staff within one health care organization. For purposes of this survey, this definition is the same as an Electronic Health Record (EHR). |
| Eligible Professionals (EPs) | Professional providers eligible for the EHR Incentive Program, according to CMS' Final Rule for the Medicare and Medicaid EHR Incentive Program. |
| Eligible Hospitals (EHs) | Hospitals eligible for the EHR Incentive Program, according to CMS' Final Rule for the Medicare and Medicaid EHR Incentive Program. |
| E-prescribing/ERx | Technology where providers use handheld or personal computer devices to review drug information and then transmit prescriptions to a printer, electronic health record, or pharmacy. Software for e-prescribing can be integrated into existing systems to allow physician access to patient-specific information in order to screen for drug interactions. |
| Health Information Exchange (HIE) | The electronic movement of health-related information among organizations according to nationally recognized standards. For the purposes of this survey, organization is synonymous with health care providers, public health agencies, payers and entities offering patient engagement services (such as personal health records). |
| Health Insurance Portability and Accountability Act (HIPAA) | A law passed by the U.S. Congress in 1996 (Public Law 104-191) that included provisions that required Health and Human Services (HHS) to adopt national standards for electronic health care transactions. HIPAA includes provisions that require doctors, hospitals and others protect the privacy of patients' health care information. |
| Health Information Organization (HIO) | An organization that oversees and governs the exchange of health-related information among organizations according to nationally recognized standards. |

| Health Information Technology (HIT) | The organization, analysis and generation of health data to treat patients and for insurance and other reimbursement, or for planning, quality assessment, research, and legal purposes. |
| --- | --- |
| Health Level Seven (HL7) | HL7 is a not-for-profit, ANSI-accredited standards developing organization dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services. |
| Interoperability | The ability of two or more systems or components to exchange information and to use the information that has been exchanged. Typically, interoperability is understood to have three components: technical, semantic, and process. See http://www.hl7.org/ehr/downloads/index_2007.asp |
| Master Patient Indexing (MPI) | MPI is a software database program that collects a patient's various provider identification numbers and keeps them under a single, community or enterprise-wide identification number. |
| Meaningful Use | The American Recovery and Reinvestment Act of 2009 (Recovery Act) authorizes the Centers for Medicare and Medicaid Services (CMS) to provide incentives for eligible professionals and hospitals who are successful in becoming "meaningful users" of certified electronic health record (EHR) technology. The Medicare EHR Incentive Program will provide incentive payments to eligible providers and hospitals that are meaningful users of certified EHR technology. The Medicaid EHR Incentive Program will provide incentive payments to eligible professionals and hospitals for efforts to adopt, implement, or upgrade certified EHR technology or for meaningful use in the first year of their participation in the program and for demonstrating meaningful use during subsequent years. |
| National Health Information Network | The Nationwide Health Information Network (NHIN) is a set of standards, services and policies that enable secure health information exchange over the Internet. The NHIN will provide a foundation for the exchange of health IT across diverse entities, within communities and across the country, helping to achieve the goals of the HITECH Act. |

| | |
|---|---|
| **Patient Problem List** | A list of a patient's diagnoses and conditions - including past conditions that may impact current health status. |
| **Personal Health Record (PHR)** | An electronic record of health-related information regarding an individual that conforms to nationally recognized interoperability standards and that can be drawn from multiple sources while being managed, shared, and controlled by the individual. |
| **Regional Health Information Organization (RHIO)** | A health information organization that brings together health care stakeholders within a defined geographic area and governs health information exchange among them for the purpose of improving health and care in that community. |
| **Structured and Reportable Data** | Test results that are entered into EHR systems in a digital or coded format - such as numbers or standard text values (e.g. "positive" or "negative"). |
| **Telemedicine** | The use of medical information that is exchanged from external health care organizations via electronic communication. |

## Appendix B - HIT and HIE Representative Projects and Systems List

### Introduction

This document highlights identified HIT and HIE projects and systems through the HIT Assessment for the State of Nevada's HIT and HIE planning efforts. As part of the research methodology, we focused primarily on systems that maintained or exchanged clinical health information. Not all HIT and HIE projects or systems are addressed in the document as there are an extensive number of HIT and HIE projects in the State of Nevada. Additional systems may also be identified through the survey. We included stakeholder systems and projects that were identified during the assessment process through outreach, communications, interviews, and focus groups. This list should be updated on a regular basis to reflect additional identification of systems and projects.

Nevada DHHS HIT, Clinical Data Systems, and HIE Systems and Projects

Health Division Bureau of Child, Family, Community and Wellness

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Women Health Connection (WHC) | CDC Subry – Cast, SQL db | Captures Woman Health data. An Excel extract file is linked to the NV Cancer Registry | No enhancements planned |
| HIV Care and Prevention - Ryan White | Queenstone – Aries, SQL db with Web front end | Ryan White eligibility system, client demographic and some clinical testing data | No clinical exchange planned |
| HIV Care and Prevention - Sexually Transmitted Disease | ADAP Access Database | Eligibility system with Client demographics | No clinical exchange planned |
| Immunizations | Envision – WebIZ, SQL db with web front end | Immunization Registry, gathers child and adult immunization administrations from Provider input. | Working on pilot HL7 interface with providers to update registry from providers' EHRs |
| Immunizations | CDC – VACMAN | VACMAN is a vaccination inventory system used to order, and optionally to track and record information relating to publicly funded (Vaccines For Children program (VFC), 317 Grant (G317), and State/other) vaccines | No plans |

Health Division Bureau of Child, Family, Community and Wellness

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Maternal and Child Health (MCH) | Maternal and Child Health data, historical data file format | File includes data, including clinical data on MCH recipients | No enhancements planned |
| Children with Special Health Care Needs (CSHCN)/Chronic Disease | Children with Special Health Care Needs and Chronic Disease data, historical data file format | File includes data, including clinical data on CSHCN/Chronic Disease recipients | No enhancements planned |

Health Division Bureau of Statistics, Planning, and Emergency Response

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Office of Health Statistics and Surveillance | Digital Innovation – Trauma Registry, FoxPro database | Moving to SQL db with web front-end | 4 trauma centers will send batch file using Isend – Isend is DiCorp's module for electronic exchange |
| Office of Health Statistics and Surveillance | CDC – Epi-Center | Database and statistics program for use by public health officials | No plans |

Health Division Bureau of Statistics, Planning, and Emergency Response

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Office of Health Statistics and Surveillance | CDC – BRFSS, SAS | The Behavioral Risk Factor Surveillance System (BRFSS) is a State-based system of health surveys that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. | No plans |
| HIV/AIDS Program | CDC – eHARS, SQL database with web frontend | EHARS is a "browser-based application" that collects, stores, and retrieves data, via a secure data network, that CDC has identified as necessary to: monitor the HIV/AIDS epidemic, identify current trends in the epidemic and evaluate HIV prevention, care, and treatment planning. | No exchange plans |
| Vital Records | Netsmart – Electronic Birth and Death Registry System (EBRS / EDRS), SQL database citrix (vendor is moving to .net | Data collected according to National Center of Health Statistics standards for birth and death certificates. | Planning interface of birth records to Immunization Registry. |
| Vital Records | SSA – OVS Web Service | Notification of birth and death are electronically sent to SSA | No plans |

Health Division Bureau of Statistics, Planning, and Emergency Response

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Cancer Registry | Precis – Cancer Registry, SQL database | Utilizes the North American Assoc of Central Cancer Registry standard format. Extract data file, manipulate and send to CDC | Possible plans for electronic exchange of pathology reports |
| Public Health Preparedness | CDC – STD*MIS, DOS-based application | STD*MIS is a data management system developed by the Statistics and Data Management Branch, Division of STD Prevention, National Center for HIV, STD, and TB Prevention (NCHSTP), Centers for Disease Control and Prevention (CDC). | No plans |
| Public Health Preparedness | Orion – Rhapsody, SQL database with web frontend | Integration Engine used to exchange electronic lab results with PHINMS | Possible plans for expansion of exchange |

Health Division Bureau of Statistics, Planning, and Emergency Response

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Public Health Preparedness | CSC – NEDSS, SQL database | The NEDSS Base System provides the ability to enter, manage, and view core demographic and nationally notifiable disease data via a Web browser. These functions also utilized by the NEDSS PAMs. It allows for the entry of completed case reports, the Base System facilitate the management of open cases under investigation and have basic infrastructure to receive and hold electronic lab results and other electronic clinical reports | Possibly use additional modules |
| Public Health Preparedness | The National Electronic Telecommunications System for Surveillance (NETSS) | The National Electronic Telecommunications System for Surveillance (NETSS) is a computerized public health surveillance information system that provides the Centers for Disease Control and Prevention (CDC) with weekly data regarding cases of nationally notifiable diseases | No plans |

Health Division Bureau of Statistics, Planning, and Emergency Response

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Early Intervention Services (EIS) | DoIT – Trac SQL Database | EIS system for tracking client eligibility and referrals | No plans |
| Early Intervention Services (EIS) | Lytec – Billing SQL Database | Practice Management System for scheduling and billing. | Possible plans to upgrade to full Lytech MD with EMR and HL7 interfaces |
| Community Health Nursing | Envision – Reproductive Health | Patient reproductive health information. No data exchange | Replacement being planned. |
| Women Infants and Children (WIC) | DoIT – WIC application Foxpro Database | WIC eligibility some clinical nutrition data | Electronic Benefits Exchange |
| Women Infants and Children (WIC) | JPM – Electronic Benefit Transfer web service | Custom communication program written to JPM EBT specifications | No plans |
| Environmental Health | DoIT – Permits Database (BHPS) SQL database | Custom application for tracking and issuing permits. | No plans |
| Environmental Health | Steton – Mobile Auditor (hosted) | Audit application for facilities | No plans |

Health Division Bureau of Statistics, Planning, and Emergency Response

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Emergency Medical Services | Nevada Electronic Data Emergency System, XML (hosted) | The system is an Electronic Patient Reporting System, which is a desktop application used by providers to upload data to a web server. The data is also upload to the National EMS System (NEMSIS). | Would like to integrate patient report with the patient's record at the ER, but this would require additional funding. |

Health Division Bureau of Health Care Quality and Compliance

| Program/Area | System/Project | Description | Future/enhancements |
|---|---|---|---|
| Health Facilities | DoIT – Stmt of Deficiency (SOD) Web Application | Allows query regarding statements of deficiencies on health facilities | Possible plans to expand |
| Health Facilities | CMS – ASPEN / Oasis / QUIES, Oral Database | Automated Survey Processing Environment (ASPEN) utilized by the Centers for Medicare Medicaid Services. ASPEN Scheduling and Tracking (AST) module. AST supports both state and CMS RO certification, complaint, and enforcement processing operations | Unknown |

## Health Division Bureau of Health Care Quality and Compliance

| Program/Area | System/Project | Description | Future/enhancements |
|---|---|---|---|
| Health Facilities | DoIT – Hospital / Med Laboratories Licensing Database, SQL database with web frontend | Custom Database tracking licenses | Unknown |
| Radiological Health | DoIT – Radiology Database (BHPS), SQL database | Custom Database tracking Radiology facilities | Unknown |

## Division of Health Care Financing and Policy

| Program/Area | System/Project | Description | Future/enhancements |
|---|---|---|---|
| Medicaid and Nevada Check Up Programs | Medicaid Management Information System (MMIS) and Decision Support System (DSS), IBM mainframe with AIX operating system and DB2 database | The MMIS is the Medicaid and Nevada Check Up Claims processing system. The MMIS is currently operated by Magellan, but is in the process of being procured through the MMIS Takeover RFP | Additional systems and peripheral tools may be obtained as part of the MMIS Takeover. An Intent to Award has been published, but this information should be updated based on contract award and contract signing. |

Division of Health Care Financing and Policy

| Program/Area | System/Project | Description | Future/enhancements |
|---|---|---|---|
| E-prescribing System for Medicaid and Nevada Checkup Providers | E-prescribing system by Magellan (through contract with SureScripts) | The e-prescribing program supports a model for Beneficiary Demographics, Eligibility, PDL/Formulary, and Medication History. Magellan contracts with SureScripts using X12 270 for eligibility verification and NCPDP SCRIPT 8.1 for medication history. The MMIS and peripheral systems and tools are currently operated by Magellan, but is in the process of being procured through the MMIS Takeover RFP | To be determined |
| Health Information Exchange Solution (requested as part of MMIS Takeover RFP) | MMIS Takeover Vendor | Description can be found in RFP No. 1824, MMIS Takeover. | To be determined |

Division of Child and Family Services

| Program/Area | System/Project | Description | Future/enhancements |
|---|---|---|---|
| Children's Mental Health | Netsmart/Avatar (health records), 64bit Dell Server running Windows 2008 Standard Edition | Used for clinical case management. They electronically bill and receive payments directly from Medicaid (First Health) with no intermediary. Not compliant yet with meaningful use yet. They send basic demographic information over an HL7 interface for in-patient children to fill prescriptions.

The Unity (SACWIS) system is not used for health records but there may be reason to interface with it in the future. | They do not have the order entry system; They need e-prescribing and electronic signatures. Trying to get that certified by the feds. Netsmart is committed to it. This is their roadmap going forward for HIT. Avatar enhancements:

**Meaningful Use**
- Order entry
- Meaningful Use Package
- Consumer Connect

**EHR**
- Mobile Connect
- Signature Pads
- WebServices/API
- Doc Management (POS)
- Doc Management (batch)
- Electronic Medication Administration Record
- Netsmart University

**System Upgrades**
- myAvatar (Radplus 2011)
- Executive Reporting System

**Maintenance**
- AM Fiscal Year 2012
- AM Fiscal Year 2013 |

Division of Mental Health and Developmental Services

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Avatar | NetSmart, Rapid Application Development Tool, CACHE Database | Electronic health record for Mental Health Clients. This system is used to maintain client treatment plans, progress notes, diagnosis information and all other clinical information. It is also used for scheduling appointments and billing claims. | Future enhancements are planned. |
| WORx | Mediware, EMC Middleware, Informix Database | Statewide Pharmacy System. This system is used for medication management and tracking of Avatar clients that use state-run pharmacy. | To be determined |
| DS-NOW | Developed and maintained in house, Classic ASP, SQL Server | Electronic health record for Developmental Services clients. This system is used to maintain client treatment plans and progress notes. | To be determined |
| DSIR (DS Incident Reporting) | Developed and maintained in house, Access, SQL Server | This system is used to track Serious Incidents. | To be determined |

Division of Mental Health and Developmental Services

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| ELCID | Developed and maintained in house, Access, SQL Server | This system is used to maintain DS Clients Demographic information and Diagnosis. | To be determined |
| Intake | Developed and maintained in house, Access, SQL Server | This system is used to intake DS applicants. | To be determined |
| SLA Invoices | Developed and maintained in house, Access, SQL Server | This system is used to process provider invoices. | To be determined |
| A-E (Authorizations and Eligibilities) | Developed and maintained in house, Access, SQL Server | This system is used to track Authorizations for services and funding source eligibilities. | To be determined |
| JDT | Developed and maintained in house, Access, SQL Server | This system is used to track contracts and invoices for jobs and day training. | To be determined |
| Waiver Services Review | Developed and maintained in house, Access, SQL Server | This system is used to track Service review process. | To be determined |

Division of Mental Health and Developmental Services

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Respite | Developed and maintained in house, Access, SQL Server | This system is used to track DS client respite balances and the IFS T-numbers and payments to DS respite providers. | To be determined |
| Category 11 Projector | Developed and maintained in house, Access, SQL Server | This system is used to project Category 11 spending (SLA authority) to the end of the fiscal year based on the current amounts of contracts if there is no change. | To be determined |
| Category 11 Projector | Developed and maintained in house, Access, SQL Server | This system is used to project Category 17 spending (Autism authority) to the end of the fiscal year based on the current amounts of contracts if there is no change. | To be determined |

Division of Mental Health and Developmental Services

| Program/Area | System/Project | Description | Future/Enhancements |
|---|---|---|---|
| Providers | Developed and maintained in house, Access, SQL Server | This system is used to manage DS provider information and their addresses. | To be determined |

# Known Stakeholder HIT and HIE Systems and Projects

Systems

| Stakeholder | System/Application | Description | Future/enhancements |
|---|---|---|---|
| Nevada Rural Hospital Partners | Interface Engine for patient information, using HL7 vs. 2.3 | Integration of 17 different systems, including integration of patient information with diagnostic digital images and radiology information | Unknown |
| Nevada Rural Hospital Partners | Diagnostic Imaging Solution for Rural Nevada (DISRN) | Provided seven hospitals with equipment and software for integrating patient information with diagnostic digital images and a centralized information system for image storage and retrieval. | Unknown |
| Nevada Rural Hospital Partners | Picture archiving and communication systems/radiology information system (PACS/RIS) | Project added these capabilities in a member hospital and improved RIS capability at seven existing sites. | Unknown |
| University of Nevada School of Medicine, Nurse Clinics in Reno | Practice Fusion System | Cloud-based system used by the Nurse Clinics in Reno through the University of Nevada, School of Medicine | In the process of scanning in all paper records. |

Systems

| Stakeholder | System/Application | Description | Future/enhancements |
|---|---|---|---|
| University of Nevada, School of Dental Medicine | System information not identified through assessment or survey | Operates paperless clinic including: electronic clinic management system, digital radiology, electronic textbooks | Unknown |
| University of Nevada Center for Health Information and Analysis (CHIA) | Inpatient hospital claims database | Database of inpatient hospital medical claims for Nevada hospitals | Unknown |
| University of Nevada Center for Health Information and Analysis (CHIA) | Outpatient hospital quality Reporting system | Developing web-based quality reporting capabilities for hospital and outpatient services | Unknown |
| University of Nevada Center for Health Statistics and Informatics | Autism Database | Statewide Autism Database | Unknown |
| Indian Health Clinics | RPMS EHR, DOS-based being enhanced to meet criteria | EHR system provided by IHS, which is in the process of being enhanced. System expected to meet ONC EHR certification requirements. | Enhancements in progress to meet certification requirements. |

Systems

| Stakeholder | System/Application | Description | Future/enhancements |
|---|---|---|---|
| Air Force, Federal Hospital | CHCS and ALTA systems | DoD health information is shared via the ALTA EHR system. EHR system is currently for inpatient care at the moment. In the process of implementing outpatient EHR, which will be complete by the end of 2010. | There was a recent congressional directive that the Air Force share information with Veterans Affairs. The VA systems are CPRS and VISTA. |
| Army National Guard | MEDPERMS | MEDPERMS is a National Medical Personnel Electronic Records Management System. | Enhancements being coordinated at federal level. |
| Veterans' Affairs | CPRS and VistA | Electronic Health Record that can be accessed across state boundaries. | Unknown |

Stakeholder Projects

| Stakeholder | Project | Description | Future/enhancements |
|---|---|---|---|
| Nevada Hospital Association | Seeking funding for broadband infrastructure | The state lacks the necessary broadband infrastructure to support it; T-1 lines exist but where shut down in rural areas due to cost (Nevada Hospital Association is seeking grant funding to help remedy the lack of infrastructure | Enhancements to be determined |
| College of Southern Nevada | Workforce Training on HIT and HIE | Online training is being provided for four workforce roles: workflow redesign specialist; a clinical practitioner support specialist; an implementation specialist; and EHR trainer. | Classes are expected to begin by the end of September. |

# Appendix C – HIT and HIE Representative Stakeholder List

## Introduction

This document highlights identified stakeholders through the HIT Assessment for the state of Nevada's HIT and HIE planning efforts. Not every HIT and HIE stakeholder is specifically addressed in this assessment as the Nevada health care stakeholder community is extremely broad. We included stakeholder groups and specific stakeholders that were identified during the assessment process for outreach, communications, interviews, and focus groups. This list should be updated on a regular basis to reflect ongoing outreach and identification of additional stakeholders.

## Primary Stakeholders

All licensed health care providers in Nevada and health care providers in other states providing services to Nevada consumers (breakdown following Table A below)

All health care consumers in Nevada

Associations, consortiums, and work groups (breakdown included in Table A)

All health plans in Nevada, including managed care plans (breakdown following Table A below)

State, county, and local government agencies (breakdown included in Table A)

Military and VA (breakdown included in Table A)

Universities and colleges (breakdown included in Table A)

HIT and HIE vendors

Indian health clinics (breakdown included in Table A)

Indian Health Board of Nevada

Nevada's HIT Regional Extension Center (HealthInsight)

Federal oversight agencies, including HHS, CMS, and ONC

National Health Information Network

American Civil Liberties Union (ACLU) Nevada

Department of Defense

Centers for Disease Control and Prevention

Lobbyists and advocates

Others as identified

Table A – Breakdown of Selected Stakeholders

Associations, Workgroups, and Consortiums

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada State Medical Association | Larry Matheis, Executive Director | Association representing approximately 2,500 to 3,000 active licensed physicians (both MDs and DOs), medical residents and medical students in the state of Nevada. This includes all localized chapters in Nevada. | Yes | Yes |
| Nevada Nurses Association | Margaret Curley, NNA Communications Director | Association representing Nevada's registered nurses including staff nurses, nurse educators, nurse practitioners, school nurses and public health nurses. This includes all localized chapters in Nevada. | Yes | Yes |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews / Focus Groups Conducted |
|---|---|---|---|---|
| Nevada Hospital Association | Bill Welch, CEO | A Statewide, professional association, representing the vast majority of Nevada hospitals (approximately 50 hospitals are represented) and other health-related agencies and organizations throughout the state. | Yes | Yes |
| Nevada Dental Association | Robert Talley, Executive Director | Association representing the majority of Nevada's dentists. | Yes | No |
| Nevada Association of Health Plans | Jack Kim, Health Plan Representative | Association representing health plans, including HMOs and PPOs in Nevada. | Yes | No |
| Nevada Occupational Therapy Association | Julie Honen, Interim President | Association representing the majority of occupational therapists in the state of Nevada. | Yes | No |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada Physical Therapy Association | Parley Anderson, President | Association representing approximately 400 physical therapists, physical therapist assistants, and physical therapy students in Nevada. | Yes | No |
| Nevada Association of Medical Products Suppliers | Richard Pozesky, President | Association representing Home Medical Equipment providers in Nevada. | Yes | No |
| Great Basin Primary Care Association | Patricia Durbin, Executive Director | The primary care association that supports and advocates on the behalf of health centers, tribal clinics and other health care safety net providers throughout Nevada. | Yes | No |
| Nevada Health Care Association | Charles Perry, Executive Director | The primary association representing long term care providers and facilities in Nevada. | Yes | Yes |
| Nevada Chiropractic Association | Dr. James Overland, President | The association representing chiropractors in Nevada. | Yes | No |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada Emergency Medical Association | Frank Bergwall, Nancy Madison, Michelle Harden, and other Board Members | The association representing emergency medical providers in Nevada through five different regions. | Yes | No |
| Nevada Speech-Language Hearing Association | Rebecca Bailey-Torres, President | The association representing speech-language and hearing providers in Nevada. | Yes | No |
| Nevada Managed Care Quality Improvement Council | Marc Amorelli, Quality Improvement Administrator, Hometown Health | A council that seeks to improve quality of managed care plans. | Yes | Yes |
| Nevada Primary Care Advisory Council | Martha Framsted, Nevada State Health Division | Primary Care Advisory Council is the Health Planning Unit's (Nevada State Health Division) Primary Care Office. The Council provides guidance and counsel to the Administrator and the Health Planning Program Manager, who are responsible for the federal J-1 Physician Visa Waiver Program in Nevada. | Yes | No |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada Health Information Management Association (AHIMA) | Peggy Brown and Greg Shultz, President Elect | The American Health Information Management Association (AHIMA) is an association of health information management (HIM) professionals. The association is dedicated to the effective management of personal health information required to deliver quality health care to the public | Yes | Yes |
| Health care Information Management Systems Society | Russell Suzuki, Vice President | Non-profit organization dedicated to promoting health care information and management systems. | Yes | Yes |
| EHR Nevada | Linda Rubinson and Russell Suzuki, Members | A joint initiative of the Southern Nevada Medical Industry Coalition (SNMIC), Nevada HIMSS, and MGMA Nevada to educate the health care community about Electronic Health Records (EHR) and other health information technologies. | Yes | Yes |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Southern Nevada Medical Industry Coalition | Linda Rubinson, SNMIC Board of Director Member | A coalition of consumers, public, and private organizations with the goal of quality health care in Southern Nevada through collaboration with public and private organizations | Yes | Yes |
| Nevada Medical Group Management Association | Phil Schwebe, President | Nevada Medical Group Management Association (NVMGMA) is a recognized affiliate of national Medical Group Management Association (MGMA), an organization dedicated to the business of medical practice management. | Yes | No |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada Ambulatory Surgery Center Association | Ahsan Khan, Executive Director Jovanna Grissom, Nevada Representative | The Nevada Ambulatory Surgery Center Association (NASCA) is dedicated to representing, enhancing, and supporting the delivery of cost-effective, high quality, advanced surgical services to Nevada's health care consumers. NASCA will represent and be an advocate for all aspects of the industry, including patients, physicians, clinical and administrative staff. | Yes | No |
| Nevada Pharmacy Association | Khanh Pham, President | Association representing pharmacists in Nevada. | Yes | No |
| Nevada Rural Hospital Partners | Todd Ratke, CIO | Nevada Rural Hospital Partners is an alliance of 14 small and rural hospitals. | Yes | Yes |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada HIT Blue Ribbon Task Force | Lynn O'Mara, State HIT Coordinator | Task Force appointed by the Governor for overseeing the State level HIT and HIE efforts. The HIT Blue Ribbon Task Force also has various subcommittees to address Governance, Infrastructure, and Financial Accountability and Sustainability | Yes | Yes |
| Broadband Task Force | Daphne DeLeon, Chair | Comprised of Governor-appointed members charged with identifying and removing barriers to broadband access and identifying opportunities for increased broadband applications and adoption in unserved and underserved areas. | No | No |
| Clark County Medical Society | Annette Teijeiro, M.D. – President | Society representing physicians in Clark County. | Yes | Yes |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews / Focus Groups Conducted |
|---|---|---|---|---|
| NV DHHS Security Committee | No contact identified as part of assessment | DHHS Committee comprised of Information Security Officers and professionals from DHHS' six divisions. Identifying where commonalities exist within the divisions. Working to consolidate these commonalities through security policies, standards and guidelines. | No | No |
| NV DHHS Confidentiality and Privacy Committee | No contact identified as part of assessment | Comprised of HIPAA Officers from each DHSS division. Addressing new requirements established by HITECH and ARRA. | No | No |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada Health Partners | Jaime Crozier, President | Nevada Health Partners is a nonprofit organization which manages the business affairs of the Nevada Health Care Coalition and conducts cost-effective health care provider contracting activities on behalf of member employers in northern Nevada serving over 35,000 lives | No | No |
| Nevada Health Care Coalition | Jaime Crozier, President | The Nevada Health Care Coalition (NHCC) is a tax-exempt Nevada nonprofit corporation dedicated to improving health care quality and providing cost-effective health care solutions. NHCC supports a subsidiary Nevada nonprofit corporation, Nevada Health Partners (NHP) | No | No |

State Agencies

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| NV DHHS Child and Family Services | Diane Comeaux, Administrator of the Division of Child and Family Services | http://www.dcfs.state.nv.us/ | Yes | Yes |
| NV DHHS Health Care Financing and Policy | Chuck Duarte, Medicaid Director | https://dhcfp.nv.gov/index. htm | Yes | No |
| NV DHHS Aging and Disability Services | Carol Sala, Administrator of the Division for Aging Services | http://aging.state.nv.us/inde x.htm | Yes | Yes |
| NV DHHS Health Division | Marla McDade Williams, Deputy Administrator<br><br>Alicia Hansen, Chief Biostatistician | http://health.nv.gov/ | Yes | Yes |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| NV DHHS Mental Health and Development Services | Dr. Harold Cook, Administrator of the Division of Mental Health and Developmental Services | http://mhds.state.nv.us/ | Yes | Yes |
| NV DHHS Welfare and Supportive Services | Romaine Gilliland, Administrator | https://dwss.nv.gov/ | No | No |
| State of Nevada – All County Health Departments | Varies by County | | Yes | No |
| State of Nevada Office of the Governor | No contact identified as part of assessment | | No | No |
| State of Nevada Legislature | Various Contacts | | No | No |
| State of Nevada Attorney General's Office | No contact identified as part of assessment | | No | No |

Nevada HIT Statewide Assessment

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Department of Education (including all pre-K, K-12, and other primary schools) | Varies | | Yes | No |
| Department of Corrections – State level | Chuck Schardin, Medical Administration<br><br>Dr. Robert Bannister, Medical Director | | Yes | Yes |
| All Corrections - County Level | Varies | | No | No |
| Local Government Agencies | Varies | | No | No |

Military and Veterans' Affairs in Nevada

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada State Veterans Affairs Home, Boulder City | Gary Bermeosolo, Administrator, Boulder City<br><br>Tamara Walcott, Manager Health Information Services/HIPAA Officer | The Nevada State Veterans Home is one of 140 state veterans' homes across the United States providing skilled nursing services to veterans, and their spouses. The home is a state-owned and operated facility and receives support from the U.S. Department of Veterans Affairs. It is an 82,000 square foot facility that accommodates 180 residents. | Yes | No |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada Office of Veterans Affairs Services, Reno | Jeanette Rae, Senior Manager (Reno) | Veterans Services provides a full continuum of quality services to eligible veterans and their families. There are four offices in the state of Nevada. | Yes | No |
| Military: Army and Army National Guard | Sgt. Ronald Pitts Colonel Moskey | The Army National Guard provides units, trained and ready for any contingency as directed by the National Command Authority or the Governor. They recruit, develop, and retain quality military and civilian personnel to support the Nevada Army National Guard during training and operations. The Army Guard currently occupies 11 Armories, a regional training site, an Army Aviation Support Facility and a number of maintenance shops. | Yes | Yes |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Military: Nellis Air Force Base 99th Medical Command Hospital | Mr. Thomas Martinez, Deputy CIO<br><br>Major James Combs, Information Management Officer | The 99th MDG provides medical care for the military community to ensure maximum wartime readiness and combat capability. The group's functions include flight medicine, surgical services, maternal and childcare, pharmacy, laboratory, radiology, dental care, medical benefits and information and diagnostic and therapeutic services. | Yes | Yes |
| Military: Fallon Naval Air Station | Lt. Commander Cynthia Hutchinson | Home to the Fighting Saints of VFC-13, the Desert Outlaws of Strike Fighter Weapons Det., and the Naval Strike and Air Warfare Center, NAS Fallon serves as the Navy's premier tactical air warfare training center. The Naval Air Station Clinic serves Navy and Marine Corps personnel and their families stationed here. | Yes | No |

Universities and Colleges

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| University of Nevada Reno, including the School of Medicine | Steven Zink, VP of IT | | Yes | Yes |
| University of Nevada Las Vegas, including the School of Dentistry | Karen West, Dean of School of Dentistry | | Yes | No |
| University of Nevada Center for Health Information and Analysis (CHIA) | No contact identified as part of assessment | | Yes | No |
| Great Basin Colleges | No contact identified as part of assessment | | No | No |
| College of Southern Nevada | Hyla Winters, Associate Vice President for Academic Affairs | | Yes | Yes |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Turo University | Julie Honan, Assistant Professor/Academic Clinical Coordinator<br><br>School of Occupational Therapy | | Yes | No |
| Nevada State College | No contact identified as part of assessment | | No | No |
| Truckee Meadows Community College | No contact identified as part of assessment | | No | No |
| Western Nevada College | No contact identified as part of assessment | | No | No |
| Desert Research Institute | No contact identified as part of assessment | | No | No |

Nevada HIT Statewide Assessment

Indian Health

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Indian Health Board of Nevada | Larry Curley, Executive Director | The Indian Health Board works with Tribal leaders, Tribal Health Care Providers, local, state, and National leaders to raise the status of Nevada's Tribal Community through advocacy, training, education, and support | Yes | Yes |
| Indian Health Clinic Directors | Various Health Clinic Directors | Most Indian Health Clinics use a system called RPMS (DOS-based, with enhancements in process; system expected to be certified). | Yes | Yes |
| Indian Health Services | No contact identified as part of assessment | The agency within the Department of Health and Human Services that is responsible for providing federal health services to American Indians and Alaska Natives. | No | No |

| Organization | Contact | Description (if applicable) | Outreach Conducted | Interviews/ Focus Groups Conducted |
|---|---|---|---|---|
| Nevada's Tribes | Various Tribal Contacts | | No | No |

## Health Care Provider Stakeholders

All licensed health care providers in the state of Nevada providing services to Nevada consumers are stakeholders, including the following:

## Providers

Allergy and Immunology

Allopathic and Osteopathic Physicians

Anesthesiology

Behavioral Health and Social Service Providers

Chiropractic Providers

Chiropractor

Clinical

Clinical Pharmacology

Colon and Rectal Surgery

Dental Assistant

Dental Hygienist

Dental Laboratory Technician

Dentist

Denturist

Dermatology

Dietary and Nutritional Service Providers

Emergency Medical Service Providers

Emergency Medicine

Eye and Vision Services Providers

Family Medicine

General Practice

Independent Medical Examiner

Internal Medicine

Legal Medicine

Marriage and Family Therapist

Medical Genetics

Neurological Surgery

Neuromusculoskeletal Medicine

Neuromusculoskeletal Medicine, Sports Medicine

Nuclear Medicine

Nursing Service Providers

Nursing Service Related Providers

Obstetrics and Gynecology

Ophthalmology

Oral and Maxillofacial Surgery

Orthopaedic Surgery

Otolaryngology

Pain Medicine

Pathology

Pediatrics

Phlebology

Physical Medicine and Rehabilitation

Plastic Surgery

Preventive Medicine

Psychiatry and Neurology

Psychoanalyst

Psychologist

Radiology

School

Social Worker

Surgery

Thoracic Surgery (Cardiothoracic Vascular Surgery)

Transplant Surgery

Urology

## Hospitals

Specialty Hospital

Acute Care Hospital

Long Term Care Hospital

Military Hospital

Psychiatric Hospital

Rehabilitation Hospital

Ambulatory Surgery Center

Critical Access Hospital

Rural Hospital

Obstetric Center

Independent Center for Emergency Medical Care

## Other Service Providers

Acupuncturist

Case Manager/Care Coordinator

Community Health Worker

Contractor

Driver

Funeral Director

Genetic Counselor, MS

Health Educator

Home Modifications

Homeopath

Interpreter

Legal Medicine

Lodging

Mechanotherapist

Medical Genetics, Ph.D. Medical Genetic

Midwife

Midwife, Lay

Military Health Care Provider

Naprapath

Naturopath

Nurse Anesthetist, Certified Registered

Nurse Practitioner

Pharmacist

Pharmacy Service Providers

Physician Assistant

Physician Assistants and Advanced Practice Nursing Providers

Podiatric Medicine and Surgery Service Providers

Reflexologist

Respiratory, Developmental, Rehabilitative and Restorative Service Providers

Sleep Specialist, PhD

Speech, Language and Hearing Service Providers

Student, Health Care

Technologists, Technicians and Other Technical Service Providers

Vehicle Modifications

## Agencies

Case Management

Community/Behavioral Health

Day Training, Developmentally Disabled Services

Early Intervention Provider Agency

Foster Care Agency

Home Health

Home Infusion

Hospice Care, Community Based

In Home Supportive Care

Local Education Agency (LEA)

Nursing Care

Program of All-Inclusive Care for the Elderly (PACE) Provider Organization

Public Health or Welfare

Supports Brokerage

Voluntary or Charitable

## Health Facilities

Ambulatory Health Care Facilities

Laboratories

Hospice

Urgent Care Centers

Skilled Nursing Facilities

Assisted Living Facilities

Residential Treatment Facilities

Respite Care Facility

Suppliers, including Durable Medical Equipment

Transportation Services

## Health Insurance Plans

All health plans in the state of Nevada providing products and coverage to Nevada consumers are key stakeholders, including the following:

Aetna Health Inc.

Anthem Blue Cross and Blue Shield

Celtic Insurance Co.

PacifiCare of Nevada

Harrison Insurance NV

Health Plan of Nevada

Hometown Health

Humana

PacifiCare of Nevada, Inc.

United HealthCare Nevada

Saint Mary's HealthFirst

Managed Care Organizations

Preferred Provider Organizations

ERISA/Self-funded Health Plans

Nevada Medicaid and CheckUp

# Appendix D – HIT Blue Ribbon Task Force Members

**Members of HIT Blue Ribbon Task Force as of July 23, 2010**

**Dr. Raymond Rawson, Chairman**
Regent
Nevada System of Higher Education

**Marc Bennett, Vice Chairman**
President and Chief Executive Officer
HealthInsight

**Brett Barratt**
Nevada Insurance Commissioner

**Bobbette Bond**
Director of Public Policy
Health Services Coalition

**Chris Bosse**
Vice President, Government Relations
Renown Health

**Brian Brannman**
Chief Operating Officer
University Medical Center of Southern Nevada

**Peggy Brown**

Nevada Chapter
American Health Information Management Association (NvHIMA)


**Tom Chase**
Chief Executive Officer
Nevada Health Centers, Inc.


**Robert Dornberger**
Vice President of Information Technology
Scolari's Food and Drug Company


**Charles Duarte**
State Medicaid Director
Nevada Division of Health Care Financing and Policy


**Tracey Green, MD**
Nevada State Health Officer


**Rick Hsu**
Partner
Maupin Cox and Legoy


**Stephen Loos, MD**
Great Basin Imaging


**Joanne Ruh**
Vice President, Information Technology and Chief Information Officer
Nevada Cancer Institute

**Robert Schaich**

Senior Vice President/Chief Information Officer

United Healthcare Nevada


**Russell Suzuki**

Nevada Chapter

Healthcare Information Management Systems Society (HIMSS)


**Maurizio Trevisan, MD**

Executive Vice Chancellor

Nevada System of Higher Education


**Glenn Trowbridge**

Consumer Representative


**Marena Works, RN**

Director

Carson City Health and Human Services
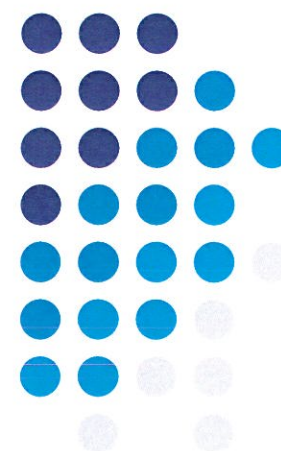

**Vacant**

Consumer Representative

# Nevada Health Information Technology Statewide Assessment

## Nevada Health Information Technology Blue Ribbon Task Force

August 20, 2010

Lynn O'Mara, State HIT Coordinator
DHHS – Office of Health Information Technology
and
Mel Rosenberg, Chief of IT
DHHS - Division of Health Care Financing & Policy

# HIT Statewide Assessment Overview

- The Office of Health Information Technology (OHIT) and Division of Health Care Financing (DHCFP) pooled funding to conduct a joint HIT Assessment.

- The HIT Assessment was initiated April 14, 2010, and the HIT Statewide Assessment Report was delivered on August 13, 2010.

- The results of the HIT Assessment will be incorporated into OHIT's HIT Strategic and Operational Plan and the State Medicaid HIT Plan.

- OHIT and DHCFP utilized a contractor, Public Knowledge, to complete the HIT Assessment.

- While not all Nevada stakeholders participated in this assessment, a statistically reliable sample was obtained.

- Conclusions have been drawn about general HIT readiness based on the information gleaned through the assessment.

# HIT Assessment Objectives

- Determine a representative level of EHR adoption and HIE utilization for health care providers.

- Assess provider readiness for the utilization of EHRs to meet meaningful use requirements.

- Identify pertinent HIE infrastructure already established in Nevada.

- Determine current barriers to EHR and HIE adoption.

- Gauge current HIT and HIE assets that could be expanded or leveraged.

- Assess readiness of providers to participate in statewide HIE.

# HIT Statewide Assessment Methodology

- Online survey of EHR utilization and exchange of health information by providers serving Nevada consumers
  - Available May 17 – July 6, 2010.
  - 364 survey responses were included in the results.
- EHR and HIE stakeholder focus groups
  - 15 focus group meetings were offered.
  - There were attendees at 10 of the 15 scheduled events.
  - Approximately 80 stakeholders participated in the focus groups.
- EHR and HIE stakeholder interviews
  - 32 one-on-one and group interviews were conducted.
  - Conducted in-person or via telephone.
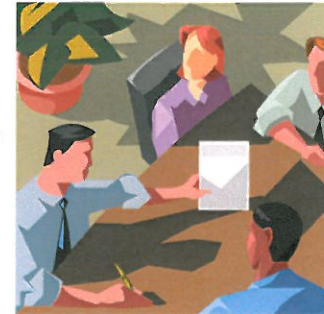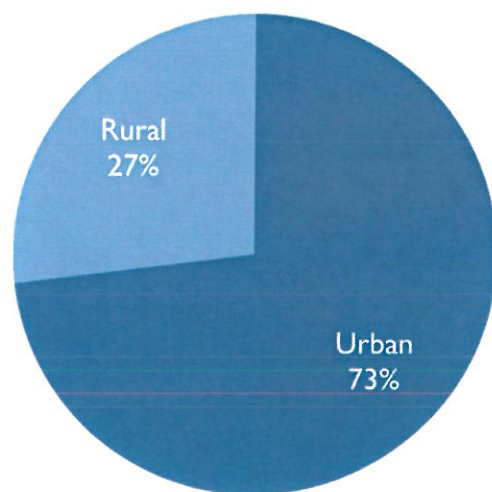
# HIT Assessment Assumptions and Constraints

- The results are a statewide assessment which generally gauge the adoption of EHR and HIE by Nevada *health care providers and payers*.

- The assessment does not represent provider EHR and HIE readiness by individual provider groups or individual providers.

- Conclusions have been drawn about general EHR and HIE provider readiness based on the information gleaned through the assessment respondents, including providers, payers and other stakeholders.
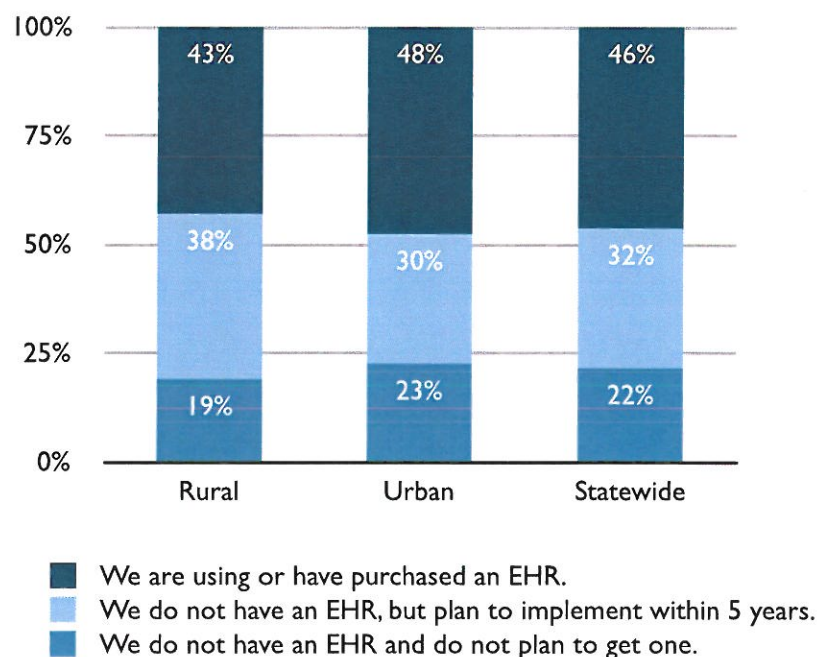
# Online Survey Results

## Urban/Rural Breakdown of Respondents



Rural 27%

Urban 73%

## Regional Breakdown of EHR Implementation Plans



| | Rural | Urban | Statewide |
|---|---|---|---|
| We are using or have purchased an EHR. | 43% | 48% | 46% |
| We do not have an EHR, but plan to implement within 5 years. | 38% | 30% | 32% |
| We do not have an EHR and do not plan to get one. | 19% | 23% | 22% |

■ We are using or have purchased an EHR.
■ We do not have an EHR, but plan to implement within 5 years.
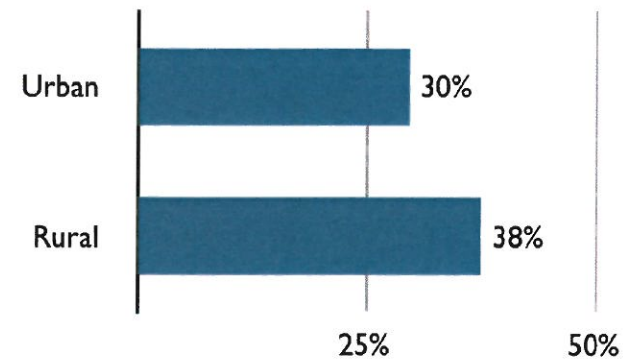■ We do not have an EHR and do not plan to get one.

# Online Survey – EHR Adoption

**Current: Urban vs. Rural**
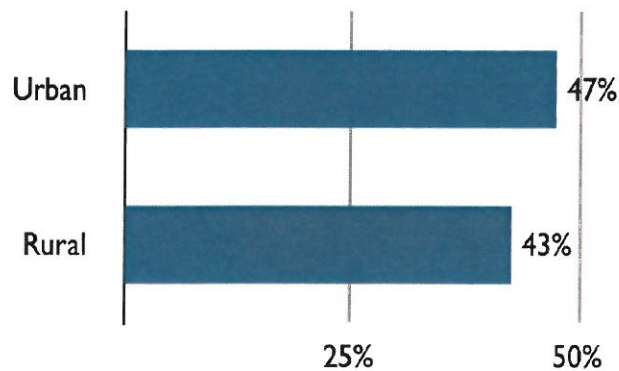
**Next 5 Years: Urban vs. Rural**

# Online Survey – Statistical Reliability

- Two dimensions of the survey data were analyzed for statistical reliability to verify representation from various provider populations: **urban vs. rural** and **hospital vs. non-hospital**.

- Survey responses represented a **convenient sample** (not a random sample), with the following typical response biases:

  - ❖ **Undercoverage bias** – A portion of the target population was not notified of the survey, due to the unavailability of comprehensive provider information and time constraints.

  - ❖ **Nonresponse bias** – Some portion of the population had the opportunity to respond, and chose not to.

  - ❖ **Voluntary response bias** – Respondents are self-selecting and may be motivated to respond because they see the survey as an opportunity to express their point of view.

# Online Survey – Statistical Reliability (continued)

- With a provider population of 5,503 and a sample of 364, the expected confidence interval is ±4.96 at the 95% confidence level.

  - ❖ For example, if 50% of the respondents said they were planning to implement an EHR, then the true population value would be between 45.04 and 54.96 with 95% confidence.

- The number of responses needed to meet the desired level of confidence was achieved for the overall population.

# HIT Assessment Findings

- 6 Broad Themes emerged:
  - ❖ <u>Theme 1</u>: Current Uses of EHR Systems
  - ❖ <u>Theme 2</u>: Direction for EHR Adoption and HIE Utilization
  - ❖ <u>Theme 3</u>: Meaningful Use and Incentive Payments
  - ❖ <u>Theme 4</u>: Barriers to Advancing EHR Adoption and HIE Utilization
  - ❖ <u>Theme 5</u>: Stakeholder Awareness and Engagement
  - ❖ <u>Theme 6</u>: HIE Governance

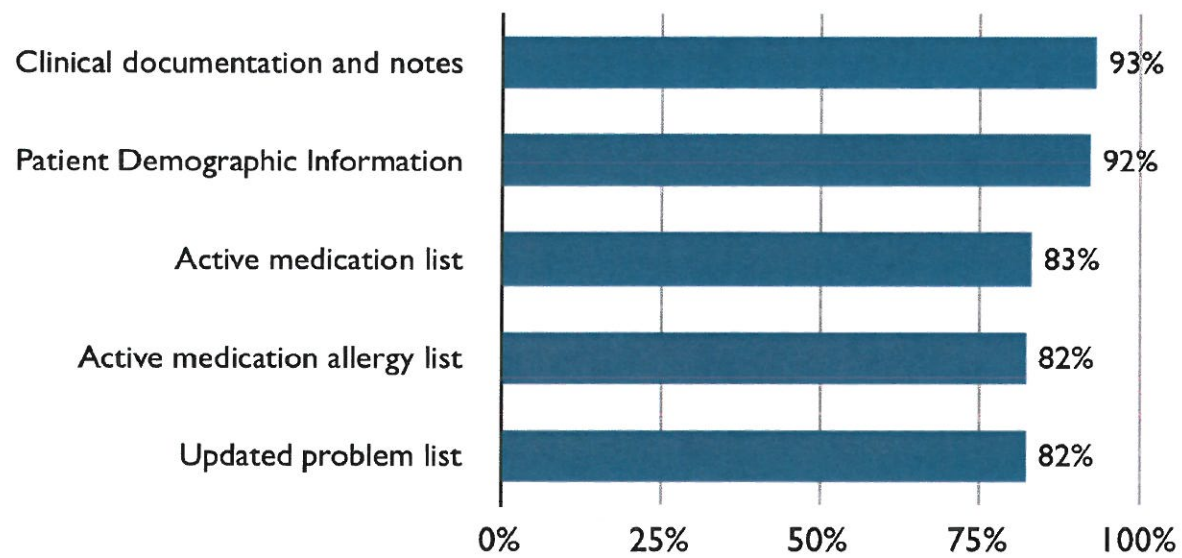# HIT Assessment Findings – Theme 1: Current Uses of EHRs

- Many of the providers reached through the assessment show an interest in increasing adoption, despite the numerous barriers that exist.
  - ❖ Nearly half of all survey respondents have an EHR (46%) and another 32% of the non-EHR users plan to implement a system within the next five years. 22% of survey responders do not have an EHR and do not plan to get one.
- Providers with EHRs report using a broad range of EHR functionalities.
  - ❖ The top 2 reported uses of EHRs are to maintain clinical documentation and notes (93% of EHR users) and maintain demographic information (92% of EHR users), but more sophisticated functions of EHRs are not consistently used.

# HIT Assessment Findings – Theme 1: Current Uses of EHRs

## Top Five Uses of Installed EHRs



| Use | Percentage |
|---|---|
| Clinical documentation and notes | 93% |
| Patient Demographic Information | 92% |
| Active medication list | 83% |
| Active medication allergy list | 82% |
| Updated problem list | 82% |

# HIT Assessment Findings – Theme 2: Direction for EHR Adoption and HIE Utilization

- The EHR adoption levels vary by provider type with the large hospitals and large physician practices reporting higher levels of EHR adoption compared to other providers.

  - ❖ According to focus group results, many of the large urban hospitals report having mature EHR systems.

- There is a lack of exchange of health information occurring in the Nevada health care system, outside of a provider's or stakeholder's network.

  - ❖ Only 20% of all survey respondents indicated they participate in Regional or Community Health Information Organizations.

# HIT Assessment Findings – Theme 2: Direction for EHR Adoption and HIE Utilization (continued)

- Large hospitals, large networks of providers, and other providers that have consciously advanced their EHR capacity ahead of federal legislation are the primary providers who have some level of readiness and capacity to participate in an HIE.

  - ❖ Many interview and focus group participants repeatedly responded they did not have an idea about the capacity that exists within their local community, their region or throughout the State for use and leveraging of HIE.

# HIT Assessment Findings – Theme 3: Meaningful Use and Incentive Payments

- Many providers are still unsure about whether or not they will apply for the incentive payments.
  - ❖ 43% of survey responders are unsure about plans to apply for the Medicare or Medicaid incentives.
  - ❖ 32% of survey responders are planning to apply for the Medicaid incentive.
- Providers will have difficulty meeting the proposed meaningful use criteria in a timely manner.
  - ❖ For example, Clinical Decision Support (CDS) is a required criterion within the core set of meaningful use. However, the survey indicates 28% of EHR users actually use CDS.

# HIT Assessment Findings – Theme 3: Meaningful Use and Incentive Payments (continued)

- The Medicaid patient volume, on average, is 28% of all patients, for those primary care providers planning to apply for Medicaid EHR incentives.

  ❖ This is based on the percentage of Medicaid patients being reported by those survey respondents planning to apply for the Medicaid incentive.

  ❖ 28% is less than the 30% threshold for Medicaid incentive program eligibility for primary care providers.

  ❖ The threshold percentage for many providers is expected to significantly increase in 2014, when the new Medicaid eligibility provisions of the Affordable Care Act go into effect.  A larger pool of eligible providers is expected at that time.

# HIT Assessment Findings – Theme 4: Barriers to Advancing EHR Adoption and HIE Utilization

- The most significant barrier to implementing, adopting and enhancing EHRs is cost.

  ❖ 48% of non-EHR users site "too expensive" as the primary reason for not implementing an EHR, according to the survey.

- Providers are overwhelmed by the number of options for EHRs and the effort required to implement or enhance systems within the timelines established at the federal level.

  ❖ The number of EHR choices was the third most often mentioned reason for not currently using an EHR.

# HIT Assessment Findings – Theme 4: Barriers to Advancing EHR Adoption and HIE Utilization (continued)

- Providers are hesitant to engage in HIE due to patient privacy and security concerns.
  - ❖ 52% of those who responded to the HIE barriers question in the survey sited HIPAA privacy, security, and other legal concerns.

- Most providers know little about HIE, including technical infrastructure and recognized standards.
  - ❖ 41% oft those who responded to the HIE barriers question in the survey cited access to technical support or expertise and another 45% cited insufficient information on options available.

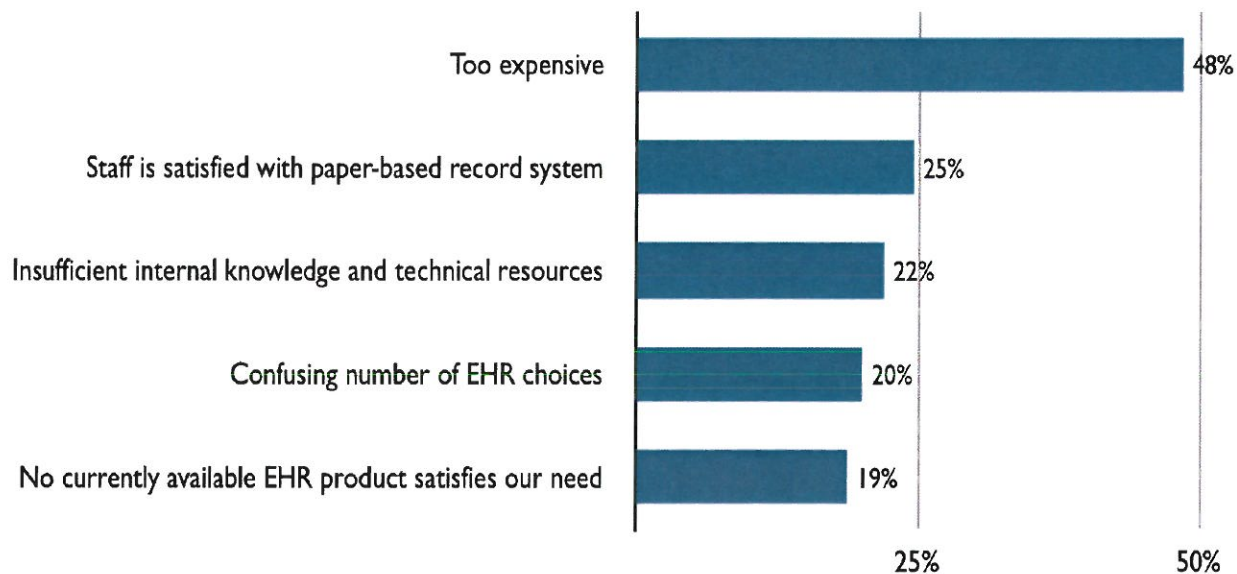# HIT Assessment Findings – Theme 4: Barriers to Advancing EHR Adoption and HIE Utilization (continued)

- Many providers are in "wait and see" mode for further investments in EHR and HIE due to uncertainty around the details of costs for participation in HIE and integration with a statewide infrastructure.

  - ❖ 44% of those that responded to the HIE barriers question in the survey cited "ROI for HIE is unclear." Another 45% cited subscription rates being too high for exchange services.

- Nevada will be competing with other states for a finite nationwide pool of qualified HIT professionals, until a stable and sustainable statewide labor pool can be established.

# HIT Assessment Findings – Theme 4: Barriers to Advancing EHR Adoption and HIE Utilization (continued)

## Top Five Reasons Respondents Have Not Adopted an EHR System



| Reason | Percentage |
|---|---|
| Too expensive | 48% |
| Staff is satisfied with paper-based record system | 25% |
| Insufficient internal knowledge and technical resources | 22% |
| Confusing number of EHR choices | 20% |
| No currently available EHR product satisfies our need | 19% |

# HIT Assessment Findings – Theme 5: Stakeholder Awareness and Engagement

- With the exception of those individuals and stakeholder groups that are involved in the HIT Blue Ribbon Task Force, awareness, understanding and engagement of State level efforts with both HIT and HIE is very low.

- Providers show some interest in getting involved in HIE-related planning activities.

- Provider awareness of the value of EHR adoption as a means of streamlining business processes and creating more efficient health care practices may be confounded by a perceived emphasis on rules and regulations.

# HIT Assessment Findings – Theme 6: HIE Governance

- Despite the variance of adoption by provider types, there is some consistency in thinking around HIE models, HIE governance, and the role of the State.

  - Assessment participants, for the most part, believe a public-private partnership model is the best governance model for the State of Nevada.

  - Most participants do not see any one entity having control of all pieces of an HIE and that the governance should be a collaborative effort involving a diversified group of stakeholders.

# Key Implications of Findings

- **EHR Adoption**

  - Despite the broad range of reported uses, providers do not consistently use EHRs and generally fall short of meaningful use.

  - It will be difficult to establish statewide HIE until more providers adopt EHR systems that meet certification criteria and have capabilities to exchange clinical data.

  - Providers need additional assistance, guidance, outreach, and financial resources to ensure they can implement/upgrade EHRs and meet meaningful use.

# Key Implications of Findings (continued)

- Statewide HIE Barriers

  ❖ The capabilities to implement HIE across disparate organizations will be limited without additional guidance on the technical infrastructure and cost for participation in HIE.

  ❖ HIE efforts will fall short without provider confidence that the necessary policies, legislation and technological safeguards are in place to ensure safe, secure HIE and protection of personal health information.

# Key Implications of Findings (continued)

- **HIT/E Stakeholder Outreach**
  - ❖ The lack of awareness by many stakeholders for the initial HIT and HIE planning efforts may prevent providers from engaging at a later date.
  - ❖ Additional and ongoing provider outreach and education regarding HIT/E efforts will be necessary to encourage eventual participation in statewide HIE.

# Recommendations and Next Steps

- Incorporate HIT Assessment Findings and Implications into the State HIT Strategic and Operational Plan and State Medicaid HIT Plan.

- Expand outreach efforts to providers and other stakeholders, including engagement in visioning and strategic planning.

- Implement HIE in incremental steps, to successfully achieve intra-state, interstate, and nationwide HIE.

- Consider additional provider incentives to encourage EHR adoption and participation in the Medicaid EHR Incentive Program.

- Begin assessing current audit functions and processes to leverage for the Medicaid EHR Incentive Program.

- Repeat the HIT Assessment annually, during the HIE Cooperative Agreement project period, to monitor progress.

# Nevada Health Information Technology Regulatory and Policy Inventory

## Nevada Health Information Technology Blue Ribbon Task Force

### August 20, 2010

Lynn O'Mara, State HIT Coordinator

DHHS – Office of Health Information Technology
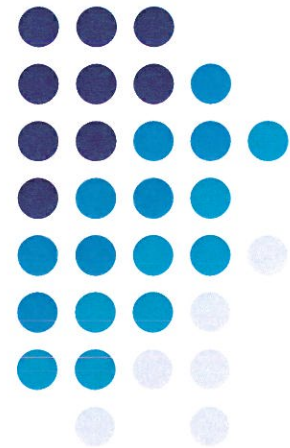
# HIT Regulatory Inventory Overview

- Required by the State HIE Cooperative Agreement to ensure state regulatory and policy harmonization with HITECH Act requirements
- The inventory was conducted by a temporary employee, who has legislative policy development and regulatory analysis experience
- Utilization of Inventory Results
  - ❖ Justification for 2011 Legislative Session Bill Draft Request
  - ❖ Development of Omnibus Bill Draft language
  - ❖ Incorporation into State HIT Strategic and Operational Plan
- Final report due August 27, 2010

# HIT Regulatory Inventory Objectives

- Review existing NRS provisions as related to ARRA HITECH Act requirements
  - Privacy and Security of Personal Health Information (PHI)
  - Electronic Health Records
  - E-Prescribing
  - Health Information Exchange
- Identify regulatory and policy barriers and gaps related to the implementation of electronic health records, achieving meaningful use, and enabling intra-state, inter-state and nationwide health information exchange
- Research and review legislation enacted by other states related to the ARRA HITECH Act

# HIT Regulatory Inventory Methodology

- The results of the comprehensive review of NRS Chapters were grouped into ten categories
  - Confidentiality of and Access to Medical Records
  - Electronic Transmission of Health Information
  - Maintenance of Medical Records
  - Prescriptions and Dangerous Drugs
  - Security of Personal Information
  - Electronic Records and Transactions
  - Creation of Medical Records
  - Medical Records as Evidence in Legal proceedings
  - Billing and Medial Records
  - Miscellaneous provisions that address health information, e.g., discharge forms used by hospitals, health information that must be provided to schools, information about births and deaths that must be provided to the State Registrar, etc.
- Review of HIT legislation enacted by other states

# HIT Regulatory Inventory Assumptions and Constraints

- Federal variables that are likely to necessitate additional state legislation

  - ❖ The revision of the National Health IT Strategic Plan (ONC)
  - ❖ The various HITECH rules/regulations in development (ONC and CMS)
  - ❖ Decisions regarding the privacy and security of PHI contained in Personal Health Records (FTC)
  - ❖ The interim regulations for standards relating to health information security and the use of mobile devices for remote data access (NIST)
  - ❖ The revision of the National Broadband Plan that is expected to include the use of wireless devices and applications in health care (FCC)

- NAC provisions were not included in this inventory, in order to meet federal and state deadlines

# HIT Regulatory Inventory Findings

- 4 Broad Topics were identified as requiring amended/enabling legislation:
  - Topic 1: Health Information Exchange
  - Topic 2: Electronic Health Records
  - Topic 3: Privacy of Electronic Health Records
  - Topic 4: Personal Health Data Storage / Health Record Repositories
- Most of the privacy concerns expressed by ACLU Nevada are already addressed in NRS
- Opt-in Patient Consent appears well supported by existing state law
- Existing provisions are scattered throughout the NRS Chapters
- Certain pharmacy statutes appear to be a significant barrier to e-prescribing

# Key Implications of Findings

- Health Information Technology/Exchange
  - ❖ Statewide infrastructure development and implementation needs state-level coordination
  - ❖ Possible licensure of entities
  - ❖ Regulation needed to ensure privacy and security compliance
- Electronic Health Records
  - ❖ Remove e-prescribing barriers
  - ❖ Provisions necessary to support HITECH requirements, e.g., meaningful use, use of federally certified EHRs, prevention of unauthorized access
  - ❖ Possible record retention and accessibility requirements

# Key Implications of Findings (continued)

- **Privacy of Electronic Health Records**
  - Prevention of personal and/or medical identity theft via medical records
  - Possible further provisions for Patient Consent

- **Personal Health Data Storage / Health Record Repositories**
  - Possible creation of new business entity, including licensure and regulation
  - Possible record retention and accessibility requirements

# Recommendations for Omnibus Bill Draft Request (BDR)

- Consolidate original 4 BDRs into one Omnibus BDR, as all the topics are interrelated and interdependent

- Designate the DHHS Director as the State HIT Authority, authorized to promulgate regulations

- Since HIT/E is rapidly changing and evolving, request only what is necessary in NRS and allow the DHHS Director to utilize the NAC for HIT policy and regulatory harmonization  (BDR passage will require an NAC inventory)

- Coordinate proposed NRS changes with responsible state agencies

# EXECUTIVE BRANCH BILL DRAFT REQUEST
## FOR THE
## 2011 LEGISLATIVE SESSION

## REQUIRED INFORMATION

**Person to be consulted if more information is needed:**

Name: Lynn O'Mara

Title: Health Information Technology Project Manager//State Health Information Tech Coordinator

Agency: Department of Health and Human Services (DHHS)
Director's Office

Mailing Address: 4126 Technology Way, Suite 100, Carson City, NV 89706

Phone Number: (775) 684-4005

E-mail Address: lgomara@dhhs.nv.gov

**Person to whom a copy of the completed draft should be mailed for review:**

Name: Lynn O'Mara

Title: Health Information Technology Project Manager/State Health Information Tech Coordinator

Mailing Address: 4126 Technology Way, Suite 100, Carson City, NV 89706

Phone Number: (775) 684-4005

E-mail Address: lgomara@dhhs.nv.gov

**Person to be contacted to provide testimony regarding the measure during the legislative session:**

Name: Lynn O'Mara

Title: Health Information Technology Project Manager/State Health Information Tech Coordinator

Mailing Address: 4126 Technology Way, Suite 100, Carson City, NV 89706

Phone Number: (775) 684-4005

E-mail Address: lgomara@dhhs.nv.gov

# EXECUTIVE BRANCH BILL DRAFT REQUEST
## FOR THE
## 2011 LEGISLATIVE SESSION

**Request:**

Describe the problem to be solved or the goal(s) of the proposed measure, or both:

On February 17, 2009, the American Recovery and Reinvestment Act of 2009 (ARRA) was signed into law, and includes the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH Act). The HITECH Act sets forth a plan for advancing the meaningful use of health information technology (HIT) to improve quality of care through the adoption of certified electronic health records (EHRs) and the facilitation of health information exchange (HIE). On February 12, 2010, DHHS received notice that it was awarded a four-year ARRA HITECH State HIE Cooperative Agreement in the amount of $6,133,426. The award is to be used for the facilitating the establishment of the core statewide infrastructure and capacity which permits intra-state, interstate and nationwide HIE, and also supports the adoption of certified EHRs and meeting meaningful use requirements. HIE is required for certain providers and hospitals to be eligible for the EHR meaningful use incentives being offered by the Centers for Medicare and Medicaid Services (CMS).

The terms and conditions of the State HIE Cooperative Agreement require harmonization of legal and policy requirements to enable HIT and remove any barriers. States are expected to use their authority, programs and resources to facilitate the process. Critical requirements of certified EHR adoption and HIE capabilities are the safeguarding and secure authorized electronic exchange of PHI, along with the establishment of the framework for oversight, accountability and regulation. Most states are finding that the mandates of HITECH are necessitating legislative parameters and regulation, beyond existing provisions. A grant-required inventory of the state's laws is being done by DHHS to help determine the regulatory and policy framework and discern what specific Nevada legislation will be necessary. The inventory final report will be completed by August 30, 2010. An important caveat is that health information technologies, particularly those related to EHRs and HIE, are in the infancy stage and constantly evolving, and regulatory oversight may require ongoing changes to meet new innovations and subsequent federal requirements. Therefore, it is believed that this would best be accomplished by formally establishing the Director of the Department of Health and Human Services as the state authority for Health Information Technology, with corresponding authority to promulgate the necessary regulations. The results of the recent Nevada HIT Statewide Assessment seem to support this, as there was a strong preference for the State to serve in an overarching regulatory role providing HIT oversight and standards setting.

There are four goals for this proposed legislation. First is the requirement that the DHHS Director coordinate the development and implementation of a statewide health information technology infrastructure and other health information technology initiatives, establish the governance framework for oversight, accountability, possible licensure, and regulation of intra-state, interstate and nationwide health information exchange, and promulgate supporting regulations. Second, while Nevada has many provisions in place regarding the creation and maintenance of electronic medical records and the protection of electronically transmitted PHI, the certified EHR systems required by HITECH, along with the ability for HIE, will require are new provisions regarding the maintenance and retention of EHRs, supporting HIE and meaningful use requirements, and safeguarding individual privacy and unauthorized access. It would be the responsibility of the DHHS Director to promulgate regulations establishing the necessary standards. Third, the HIE and meaningful use requirements of HITECH may require additional provisions will to further protect consumers from unauthorized access to their PHI and to prevent personal and/or medical identity theft, with the DHHS Director authorized to promulgate the necessary regulations. Finally, it is possible that Nevada's HIT technical infrastructure will include centralized or quasi-centralized data storage of the PHI contained in EHRs. Arizona, Kentucky and Washington are already piloting versions of these health record repositories. If Nevada decides to pursue a similar path, it would require the creation of a new type of business entity, and the DHHS Director would require the authorization to promulgate the necessary regulations for their establishment, licensure, oversight, accountability, and regulation.

# EXECUTIVE BRANCH BILL DRAFT REQUEST
## FOR THE
## 2011 LEGISLATIVE SESSION

**Effective Date:**

The proposed measure, if enacted, will become effective on October 1, 2011, unless one of the following dates is specified:

☐ Passage and Approval

☒ July 1, 2011

☐ January 1, 2012

☐ Other [                                                                              ]

**Fiscal Notes:**

*State:*

Would this measure, if enacted, create or increase any fiscal liability of state government or decrease any revenue of state government which appears to be in excess of $2,000?

☐ Yes      ☐ No      ☒ Unknown

Would this measure, if enacted, increase or newly provide for a term of imprisonment in the state prison or make release on parole or probation from the state prison less likely?

☐ Yes      ☒ No      ☐ Unknown

*Local:*

Would this measure, if enacted, reduce revenues or increase expenditures of a local government?

☐ Yes      ☐ No      ☒ Unknown

Would this measure, if enacted, increase or newly provide for a term of imprisonment in county or city jail or detention facility or make release on probation therefrom less likely?

☐ Yes      ☒ No      ☐ Unknown

**Unfunded Mandate:**

Would this measure, if enacted, have the effect of requiring one or more local governments to establish, provide or increase a program or service which is estimated to cost more than $5,000 per local government and a specified source for the additional revenue to pay the expense is not authorized by this measure or another specific statute?

☐ Yes      ☐ No      ☒ Unknown

# EXECUTIVE BRANCH BILL DRAFT REQUEST
## FOR THE
## 2011 LEGISLATIVE SESSION

**Suggested Language or Proposed Solution to Problem:**

Establish provisions regarding Health Information Technology.

**Special Instructions (e.g., disfavored wording):**

The HITECH Act stipulates the term "electronic health record", as it is a more encompassing term than "electronic medical record, particularly for public health preparedness and surveillance purposes.

**NRS Title, Chapter and Sections, Nevada Constitutional Provisions, Administrative Regulations (NAC) Affected:**

TBD by the required HIT Regulatory and Policy Inventory for ARRA HITECH Health Information Exchange Cooperative Agreement, due August 30, 2010

**Similar Measures from Current or Previous Sessions:**

While there are none apparent, the results of the HIT Regulatory and Policy Inventory mentioned above will help with this determination.

**Federal Law/Court Cases/Attorney General Opinions Involved:**

None

**Similar Statutes in Other States:**

Alaska, California, Colorado, Iowa, Maryland, Minnesota, New Hampshire, New Jersey, New Mexico, Texas
Notes: 1) the NCSL maintains a database of HIT-related legislation enacted in the last two years and 2) by early September 2010, the Health Record Banking Alliance expects to release suggested state legislative provisions for health record respositories

**Related Newspaper or Periodical Articles:**

None

# EXECUTIVE BRANCH BILL DRAFT REQUEST
## FOR THE
## 2011 LEGISLATIVE SESSION

**Please Note:** Pursuant to Senate Bill No. 490 (2007), subsection 4 of NRS 218.2455 now provides that all legislative measures requested by the Governor on behalf of state agencies, boards and departments must be prefiled on or before December 15 preceding the regular legislative session. A measure that is not prefiled on or before that date is deemed by statute to be withdrawn. There is no authority for anyone to waive this provision.

**The Division of Budget and Planning requires original signatures on all Bill Draft Requests. Therefore, please submit your Bill Draft Request electronically *and* submit the signed original to the Division of Budget and Planning.**

_____
Signature of Person Submitting Request
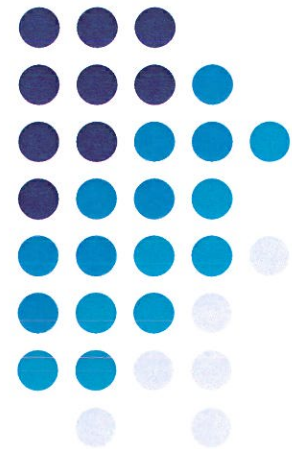
_____
Signature of Budget Director

Submit by Email

# Nevada Health Information Technology Strategic and Operational Plan

## Nevada Health Information Technology Blue Ribbon Task Force

### August 20, 2010

Lynn O'Mara, State HIT Coordinator

DHHS – Office of Health Information Technology

# State HIE Cooperative Agreement – Update

- Mandated State responsibilities under the State HIE Program in 2011
  - ❖ Transparent multi-stakeholder process
  - ❖ Monitor and track meaningful use HIE capabilities in the state, via reporting on specified measures
  - ❖ Assure trust of information sharing
  - ❖ Develop and implement strategy to meet gaps in HIE capabilities for meaningful use
  - ❖ Ensure consistency with national policies and standards
  - ❖ Align with Medicaid and public health programs
- Program priority is ensuring eligible providers have at least one option available to meet HIE requirements in 2011
- ONC has acknowledged that not all states will get to the same place, at the same time – "do your best"

# State HIT Strategic and Operational Plan Requirements

- Environmental Scan Results, including an HIE Gap Analysis

- Strategy to Meet Meaningful Use

- Coordination with State Medicaid Program

- State HIE Sustainability Plans, with the primary focus on sustaining information sharing efforts, not the persistence of HIE entities

- Operational Strategy for Supporting Meaningful Use

- Regulatory and Policy Inventory Results, to ensure state regulatory and policy harmonization with HITECH Act requirements

- Project Management Plans

- Risk Assessment and Mitigation Strategies for Building and Sustaining HIE capacity

- HIE Architecture and Standards

- Privacy and Security Framework that must address all the principles outlined in the HHS HIT Privacy and Framework (http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_10731_848088_0_0_18/NationwidePS_Framework-5.pdf )

# Nevada HIT Strategic and Operational Plan – Overview

- Results of the Environmental Scan and Regulatory Inventory are the foundation
- Plan will be done incrementally
  - More due diligence necessary before deciding what works best for Nevada
  - Plan revisions will be submitted to ONC as decisions/ milestones reached and/or as required by the grant
- 3 required statewide HIE capabilities in the next year
  - E-prescribing
  - Receipt of structure lab results
  - Sharing of patient care summaries across unaffiliated organizations

# Nevada HIT Strategic and Operational Plan – Overview (continued)

- Future HIE capabilities, by end of grant
  - Administrative transactions with health plans and Medicaid
  - Public health reporting

- New Requirement: Statewide HIE Gap Analysis
  - Expansion of Environmental Scan
  - Contract amendment in process for Public Knowledge to do the analysis, which is expected to begin in mid-October
  - Must establish baseline for, track & monitor, and report on 4 measures for meaningful use
    - % pharmacies accepting electronic prescribing and refill requests
    - % clinical laboratories sending results electronically
    - % health plans supporting electronic eligibility and claims transactions
    - % health departments electronically receiving immunizations, syndromic surveillance, and notifiable laboratory results

# Strategic Plan for Statewide HIE

- **General Topics**
  - ❖ Environmental Scan
  - ❖ HIE Development
  - ❖ HIE Policy Development
  - ❖ HIT Adoption and Supporting Meaningful Use
  - ❖ Medicaid Coordination
  - ❖ REC Coordination
  - ❖ Coordination with Medicare and Other Federally Funded State-based Programs
  - ❖ Coordination with Federal Health Care Delivery Organizations
  - ❖ Coordination with the Nationwide Health Information Network
  - ❖ Coordination with Other ARRA Programs

# Strategic Plan for Statewide HIE (continued)

- **Domain Requirements**
  - Governance
  - Finance
  - Technical Infrastructure
  - Business and Technical Operations
  - Regulatory / Policy, including Privacy and Security

# Possible Governance Structure

| | Role & Responsibilities | Public | Public-Private Partnership | Private |
|---|---|---|---|---|
| Oversight | DHHS Director is State HIT Regulatory Authority, who oversees all HIT activities and Board actions | X | | |
| HIT Board | Maintains operational directives consistent with state agenda and standards; advisory to DHHS Director | | X | |
| Operations | Carry out day-to-day HIT/E operations, in accordance with state and federal laws and standards | | | X |

# Operational Plan for Statewide HIE

- **General Topics**
  - ❖ Coordination with Other ARRA Programs
  - ❖ Coordination with Other States / Interstate HIE
  - ❖ Medicaid Coordination
  - ❖ REC Coordination
  - ❖ Coordination with Medicare and Other Federally Funded State-based Programs
  - ❖ Coordination with Federal Health Care Delivery Organizations
  - ❖ Coordination with the Nationwide Health Information Network

# Operational Plan for Statewide HIE (continued)

- Domain Requirements
  - ❖ Governance
  - ❖ Financial Model and Sustainability
  - ❖ Program Management
  - ❖ Technical Infrastructure
  - ❖ Business and Technical Operations
  - ❖ Risk Management
  - ❖ Regulatory / Policy, including Privacy and Security

# Nationwide Privacy and Security Framework For Electronic Exchange of Individually Identifiable Health Information

December 15, 2008

Office of the National Coordinator for Health Information Technology
U.S. Department of Health and Human Services

# I. Preamble to the Nationwide Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information

## PURPOSE

Electronic health information exchange promises an array of potential benefits for individuals and the U.S. health care system through improved clinical care and reduced cost. At the same time, this environment also poses new challenges and opportunities for protecting individually identifiable health information. In health care, accurate and complete information about individuals is critical to providing high quality, coordinated care. If individuals and other participants in a network lack trust in electronic exchange of information due to perceived or actual risks to individually identifiable health information or the accuracy and completeness of such information, it may affect their willingness to disclose necessary health information and could have life-threatening consequences. A key factor to achieving a high-level of trust among individuals, health care providers, and other health care organizations participating in electronic health information exchange is the development of, and adherence to, a consistent and coordinated approach to privacy and security. Clear, understandable, uniform principles are a first step in developing a consistent and coordinated approach to privacy and security and a key component to building the trust required to realize the potential benefits of electronic health information exchange.

The principles below establish a single, consistent approach to address the privacy and security challenges related to electronic health information exchange through a network for all persons, regardless of the legal framework that may apply to a particular organization. The goal of this effort is to establish a policy framework for electronic health information exchange that can help guide the Nation's adoption of health information technologies and help improve the availability of health information and health care quality. The principles have been designed to establish the roles of individuals and the responsibilities of those who hold and exchange electronic individually identifiable health information through a network.

## BACKGROUND

Numerous forces are driving the health care industry towards the use of health information technology, such as the potential for reducing medical errors and health care costs, and increasing individuals' involvement in their own health and health care. To facilitate this advancement and reap its benefits while reducing the risks, it is important to consider individual privacy interests together with the potential benefits to population health.

- Historical Perspective

The Federal government has long recognized the importance of privacy and security protections for the electronic collection, use, and disclosure of individually identifiable information and principles or practices to guide those actions. As early as 1973, the

U.S. Department of Health, Education, and Welfare (HEW) appointed the Advisory Committee on Automated Personal Data Systems to analyze the consequences of using computers to keep records about people. In order to benefit from computerization while providing privacy safeguards, the advisory committee developed the *Code of Fair Information Practice*, which addresses five practices: openness, disclosure, secondary use, correction, and security. These practices have influenced many U.S. laws at both the Federal and state levels and also numerous other national and international documents. For example, in 1974, the Privacy Act was passed, which protects certain personal information held by Federal agencies. In 1980, the Organisation for Economic Cooperation and Development (OECD), an international organization comprised of 24 countries including the U.S., published a consensus document, the *Guidelines on the Protection of Privacy and Transborder Flows of Personal Data*. The purpose of the Guidelines was to decrease disparities and assist in harmonizing legislation that would allow the flow of data while preventing violations of what the OECD member countries considered fundamental human rights. In 1998, the Federal Trade Commission published *Privacy Online: a Report to Congress*, which among other conclusions stated that effective self-regulation is the preferred approach to protecting individuals' privacy. Most recently, the U.S. Department of Health and Human Services (HHS) built on these principles in developing the Privacy Rule under the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

In 2004, the Office of the National Coordinator for Health Information Technology (ONC) was created by E.O. 13335, which charged the National Coordinator to the extent permitted by law, to develop, maintain, and direct the implementation of, a strategic plan to guide the nationwide implementation of interoperable health information technology in both the public and private health care sectors and to address in the plan, among other things, "privacy and security issues related to interoperable health information technology and recommend methods to ensure appropriate authorization, authentication, and encryption of data for transmission over the Internet..."

- Legal Environment

Over several decades, states have passed laws to protect the privacy of health information. These laws differ from state to state and often narrowly target a particular population, health condition, data collection effort, or specific types of health care organizations. As a result, states have created a patchwork of privacy protections that are not comprehensive or easily understood. Many states also have begun to consider information security related issues and have passed laws, for example, requiring various types of entities to provide notice of security breaches of individually identifiable information.

At the Federal level, there are also a variety of laws related to the privacy and security of health information, including the HIPAA Privacy and Security Rules, the Privacy Act of 1974, the Confidentiality of Alcohol and Drug Abuse Patient Records Regulation (42 CFR Part 2), the Family Educational Rights & Privacy Act (addresses privacy of information held by certain educational institutions), Gramm-Leach-Bliley Financial

Services Act (addresses privacy of information held by financial institutions), and Federal Information Security Management Act of 2002 (FISMA).

The Privacy and Security Rules promulgated under HIPAA were the first Federal regulations to broadly address the privacy and security of health information. They establish a baseline of national privacy and security standards for individually identifiable health information held by "covered entities" and a foundation of protection regardless of health condition, type of health program, population, state where the activity occurs, or other situational characteristics.

Although the HIPAA Privacy and Security Rules apply to health information in electronic form, the current landscape of electronic health information exchange poses new issues and involves additional organizations that were not contemplated at the time the rules were drafted.

## METHODOLOGY

In the development of the Nationwide Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information, ONC reviewed various international, national, and public and private sector privacy and security principles that focused on individual information in an electronic environment (but not necessarily on health), including those that focused on individually identifiable health information. This review included:

- o *HEW Advisory Committee's Code of Fair Information Practice[i]*

- o Markle Foundation's *Connecting Consumers: Common Framework for Networked Personal Health Information[ii]*

- o Organisation for Economic Co-operation and Development (OECD) *Guidelines on the Protection of Privacy and Transborder Flows of Personal Data[iii]*

- o *Health Information Technology – Consumer Principles[iv]*

- o Federal Trade Commission's *Privacy Online: A Report to Congress – Fair Information Practice Principles[v]*

- o The International Security Trust and Privacy Alliance's (ISTPA): *Privacy Framework[vi]*

    It is worth noting that ISTPA conducted a privacy and security principles analysis and harmonization, while accommodating variation from the following instruments, which resulted in the ISTPA principles reviewed by HHS:
    - *The Privacy Act of 1974*
    - OECD  *Guidelines on the Protection of Privacy and Transborder Flows of Personal Data*

- UN Guidelines Concerning Personalized Computer Files
- EU Data Protection Directive 95/46/EC
- Canadian Standards Association Model Code (incorporated in the Personal Information Protection and Electronic Documents Act [PIPEDA])
- *Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Rules*
- US FTC Statement of Fair Information Practice Principles
- US-EU Safe Harbor Privacy Principles
- Australian Privacy Act – National Privacy Principles
- Japan Personal Information Protection Act
- APEC (Asia-Pacific Economic Cooperation) Privacy Framework

There was a great deal of commonality across these principles. After a careful review and analysis of these principles, we harmonized them while accommodating as much variation as possible and being careful to consider how they may apply to electronic health information exchange. We also reviewed the approaches taken by various Federal laws, specifically the HIPAA Privacy and Security Rules, the Privacy Act, and FISMA, as well as recommendations that the Secretary had approved from two advisory committees, the National Committee on Vital and Health Statistics (NCVHS) and the American Health Information Community (AHIC).

## PRINCIPLES

The principles outlined in the Nationwide Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information serve as a guide for public and private-sector entities that hold or exchange electronic individually identifiable health information and the development of any compliance and enforcement approaches, including industry self-regulation. Additionally, these principles are designed to complement and work with existing Federal, state, territorial, local, and tribal laws and regulations and should not be construed or interpreted as supplanting or altering any applicable laws or regulations. Various Federal Government agencies are expected to look to these principles as the framework for their policy and technology activities in this area and to encourage states and private sector organizations to do the same.

The implementation of these principles should be dynamic and subject to modification as information practices and technologies advance; however, these principles are designed to be applicable as technology changes.

- **Scope**

***These principles are expected to guide the actions of all health care-related persons and entities that participate in a network for the purpose of electronic exchange of individually identifiable health information. These principles are not intended to apply to individuals with respect to their own individually identifiable health information.***

By adopting these principles, persons and entities will follow a common approach to privacy and security and develop appropriate and comparable protections for information, thereby increasing trust in electronic exchange of individually identifiable health information. These principles do not apply to individuals with respect to their own individually identifiable health information. Individuals may use and/or disclose their individual health information as they choose. For example, an individual may share details of a chronic disease on the Internet or in a public meeting but may decide not to share that information with all his or her health care providers or employers. Likewise, an individual should not be expected to implement the administrative responsibilities of these principles such as developing policies and procedures.

- **Organization of the Principles**

The framework is comprised eight principles that are organized as follows:

  o Principles (Level I): Each principle is made up of a short title and a concise statement designed to clearly and simply reflect the concept embodied within each: Individual Access; Correction; Openness and Transparency; Individual Choice; Collection, Use, and Disclosure Limitation; Data Quality and Integrity; Safeguards; and Accountability.

  o Detail (Level II): Each principle is followed by a short explanation that further elaborates on the principle, what it is designed to do, and its parameters.

- **Terminology**

In order to best understand the scope and application of the principles, it is recommended that the reader refer to the glossary (Appendix 1), particularly with respect to the definitions of "individuals" and "persons and entities."

## II. The Nationwide Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information

*SCOPE*

**These principles are expected to guide the actions of all health care-related persons and entities that participate in a network for the purpose of electronic exchange of individually identifiable health information. These principles are not intended to apply to individuals with respect to their own individually identifiable health information.**

*INTRODUCTION*

Adoption of privacy and security protections is essential to establishing the public trust necessary for effective electronic exchange of individually identifiable health information. A common set of principles that stakeholders accept and support is the first step towards realizing those privacy and security protections and establishing the necessary public trust. The approach of developing principles to guide information practices while advancing technology was marked by the 1973 release of the Code of Fair Information Practice and has been the basis for various activities in the public and private sectors, including the development of the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule and as the basis for this framework.

The implementation of these principles should evolve in concert with technological advances that allow for greater protections. Adherence should be the responsibility of each health care-related person or entity that holds and exchanges electronic individually identifiable health information through a network, as well as the responsibility of other persons and entities that receive or have access to such information, so that electronic individually identifiable health information is protected at all times.

These principles do not constitute legal advice and do not affect a person's or entity's duty to comply with applicable legal requirements. Where these principles set higher standards than legal requirements, adherence to these principles is encouraged.

**INDIVIDUAL ACCESS**

Individuals should be provided with a simple and timely means to access and obtain their individually identifiable health information in a readable form and format.

*Access to information enables individuals to manage their health care and well-being. Individuals should have a reasonable means of access to their individually identifiable health information. Individuals should be able to obtain this information easily, consistent with security needs for authentication of the individual; and such information should be provided promptly so as to be useful for managing their health. Additionally, the persons and entities, that participate in a network for the purpose of electronic*

*exchange of individually identifiable health information, should provide such information in a readable form and format, including an electronic format, when appropriate. In limited instances, medical or other circumstances may result in the appropriate denial of individual access to their health information.*

## CORRECTION

Individuals should be provided with a timely means to dispute the accuracy or integrity of their individually identifiable health information, and to have erroneous information corrected or to have a dispute documented if their requests are denied.

*Individuals have an important stake in the accuracy and integrity of their individually identifiable health information and an important role to play in ensuring its accuracy and integrity. Electronic exchange of individually identifiable health information may improve care and reduce adverse events. However, any errors or conclusions drawn from erroneous data may be easily communicated or replicated (e.g., as a result of an administrative error as simple as a transposed digit or more complex error arising from medical identity theft). For this reason it is essential for individuals to have practical, efficient, and timely means for disputing the accuracy or integrity of their individually identifiable health information, to have this information corrected, or a dispute documented when their requests are denied, and to have the correction or dispute communicated to others with whom the underlying information has been shared. Persons and entities, that participate in a network for the purpose of electronic exchange of individually identifiable health information, should make processes available to empower individuals to exercise a role in managing their individually identifiable health information and should correct information or document disputes in a timely fashion.*

## OPENNESS AND TRANSPARENCY

There should be openness and transparency about policies, procedures, and technologies that directly affect individuals and/or their individually identifiable health information.

*Trust in electronic exchange of individually identifiable health information can best be established in an open and transparent environment. Individuals should be able to understand what individually identifiable health information exists about them, how that individually identifiable health information is collected, used, and disclosed and whether and how they can exercise choice over such collections, uses, and disclosures. Persons and entities, that participate in a network for the purpose of electronic exchange of individually identifiable health information, should provide reasonable opportunities for individuals to review who has accessed their individually identifiable health information or to whom it has been disclosed, in a readable form and format. Notice of policies, procedures, and technology-- including what information will be provided under what circumstances -- should be timely and, wherever possible, made in advanced of the collection, use, and/or disclosure of individually identifiable health*

information. Policies and procedures developed consistent with this _Nationwide Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information_ should be communicated in a manner that is appropriate and understandable to individuals.

## INDIVIDUAL CHOICE

Individuals should be provided a reasonable opportunity and capability to make informed decisions about the collection, use, and disclosure of their individually identifiable health information.

_The ability of individuals to make choices with respect to electronic exchange of individually identifiable health information concerning them is important to building trust. Persons and entities, that participate in a network for the purpose of electronic exchange of individually identifiable health information, should provide reasonable opportunities and capabilities for individuals to exercise choice with respect to their individually identifiable health information. The degree of choice made available may vary with the type of information being exchanged, the purpose of the exchange, and the recipient of the information. Applicable law, population health needs, medical necessity, ethical principles, and technology, among other factors, may affect options for expressing choice. Individuals should be able to designate someone else, such as a family member, care-giver, or legal guardian, to make decisions on their behalf. When an individual exercises choice, including the ability to designate someone else to make decisions on his or her behalf, the process should be fair and not unduly burdensome._

## COLLECTION, USE, AND DISCLOSURE LIMITATION

Individually identifiable health information should be collected, used, and/or disclosed only to the extent necessary to accomplish a specified purpose(s) and never to discriminate inappropriately.

_Establishing appropriate limits on the type and amount of information collected, used, and/or disclosed increases privacy protections and is essential to building trust in electronic exchange of individually identifiable health information because it minimizes potential misuse and abuse. Persons and entities, that participate in a network for the purpose of electronic exchange of individually identifiable health information, should only collect, use, and/or disclose information necessary to accomplish a specified purpose(s). Persons and entities should take advantage of technological advances to limit data collection, use, and/or disclosure._

## DATA QUALITY AND INTEGRITY

Persons and entities should take reasonable steps to ensure that individually identifiable health information is complete, accurate, and up-to-date to the extent necessary for the person's or entity's intended purposes and has not been altered or destroyed in an unauthorized manner.

*The completeness and accuracy of an individual's health information may affect, among other things, the quality of care that the individual receives, medical decisions, and health outcomes. Persons and entities, that participate in a network for the purpose of electronic exchange of individually identifiable health information, have a responsibility to maintain individually identifiable health information that is useful for its intended purposes, which involves taking reasonable steps to ensure that information is accurate, complete, and up-to-date, and has not been altered or destroyed in an unauthorized manner. Persons and entities have a responsibility to update or correct individually identifiable health information and to provide timely notice of these changes to others with whom the underlying information has been shared. Moreover, persons and entities should develop processes to detect, prevent, and mitigate any unauthorized changes to, or deletions of, individually identifiable health information.*

## SAFEGUARDS

Individually identifiable health information should be protected with reasonable administrative, technical, and physical safeguards to ensure its confidentiality, integrity, and availability and to prevent unauthorized or inappropriate access, use, or disclosure.

*Trust in electronic exchange of individually identifiable health information can only be achieved if reasonable administrative, technical, and physical safeguards are in place to protect individually identifiable health information and minimize the risks of unauthorized or inappropriate access, use, or disclosure. These safeguards should be developed after a thorough assessment to determine any risks or vulnerabilities to individually identifiable health information. Persons and entities, that participate in a network for the purpose of electronic exchange of individually identifiable health information, should implement administrative, technical, and physical safeguards to protect information, including assuring that only authorized persons and entities and employees of such persons or entities have access to individually identifiable health information. Administrative, technical, and physical safeguards should be reasonable in scope and balanced with the need for access to individually identifiable health information.*

## ACCOUNTABILITY

These principles should be implemented, and adherence assured, through appropriate monitoring and other means and methods should be in place to report and mitigate non-adherence and breaches.

*These nationwide privacy and security principles will not be effective in building trust in electronic exchange of individually identifiable health information unless there is compliance with these Principles and enforcement mechanisms. Mechanisms for assuring accountability include policies and procedures and other tools. At a minimum, such mechanisms adopted by persons and entities, that participate in a network for the purpose of electronic exchange of individually identifiable health information, should address: (1) monitoring for internal compliance including authentication and*

authorizations for access to or disclosure of individually identifiable health information; (2) the ability to receive and act on complaints, including taking corrective measures; and (3) the provision of reasonable mitigation measures, including notice to individuals of privacy violations or security breaches that pose substantial risk of harm to such individuals.

[i] The U.S. Department of Health, Education and Welfare now the U.S. Department of Health and Human Services:    http://www.hhs.gov/
*Report of the Secretary's Advisory Committee on Automated Personal Data Systems* (1973): http://aspe.hhs.gov/DATACNCL/1973privacy/tocprefacemembers.htm

[ii] Markle Foundation:  http://www.markle.org/
*Common Framework for Networked Personal Health Information: Overview and Principles (Current as of 2008):*  http://www.connectingforhealth.org/phti/reports/overview.html

[iii] Organisation for Economic Co-operation and Development (OECD): *http://www.oecd.org/home/0,2987,en_2649_201185_1_1_1_1_1,00.html*
*Guidelines on the Protection of Privacy and Transborder Flows of Personal Data (1980):* *http://www.oecd.org/document/18/0,3343,en_2649_34255_1815186_1_1_1_1,00.html*

[iv] *Health Information Technology – Consumer Principles* (2006), Endorsed by: AARP AFL-CIO; American Federation of State, County and Municipal Employees; American Federation of Teachers; Center for Medical Consumers; Communications Workers of America; Consumers Union; Department for Professional Employees, AFL-CIO; Childbirth Connection Health Care for All; Health Privacy Project; International Association of Machinists and Aerospace Workers; International Union, United Auto Workers; National Coalition for Cancer Survivorship; National Consumers League; National Partnership for Women & Families; Service Employees International Union; Title II Community AIDS National Network; United Steelworkers International Union (USW):  http://www.nclnet.org/health/final%202006%20principles%20PDF.pdf

[v] Federal Trade Commission (FTC):  http://www.ftc.gov/
Privacy Online: A Report to Congress (1998) – Fair Information Practice Principles: http://www.ftc.gov/reports/privacy3/fairinfo.shtm

[vi] International Security Trust and Privacy Alliance (ISTPA): www.istpa.org
Analysis of Privacy Principles: An Operational Study (2007, Version 1.8): http://www.istpa.org/pdfs/ISTPAAnalysisofPrivacyPrinciplesV2.pdf

# APPENDIX I: GLOSSARY

**Administrative safeguards:** Administrative actions, and policies and procedures to manage the selection, development, implementation, and maintenance of security measures to protect electronic individually identifiable health information and to manage the conduct of the entity's workforce in relation to the protection of that information. Administrative safeguards include policies and procedures, workforce training, risk management plans, and contingency plans.

**Collect/Collection:** The acquisition or receipt of information, including individually identifiable health information.

**Corrective measures:** Actions taken to address a security breach or privacy violation, with the intent to counteract the breach or violation and reduce future risks.

**Disclose/Disclosure:** The release, transfer, exchange, provision of access to, or divulging in any other manner of information outside the person or entity holding the information.

**Health Information:** Any information that relates to the past, present, or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present, or future payment for the provision of health care to an individual.

**Individual:** A person who is the recipient of health and/or wellness services.

**Individually Identifiable Health Information:** Health information that identifies the individual, or with respect to which there is a reasonable basis to believe the information can be used to identify the individual.

**Open:** Actively communicating information through notice or otherwise.

**Persons and Entities:** Health care professionals, partnerships, proprietorships, corporations and other types of organizations and their agents when acting on their behalf.

**Physical safeguards:** Physical measures, policies and procedures to protect electronic information systems and related buildings and equipment from natural and environmental hazards, and unauthorized intrusion. Physical safeguards include workstation security and use procedures, facility security plans, data backup and storage, and portable device and media controls.

**Privacy:** An individual's interest in protecting his or her individually identifiable health information and the corresponding obligation of those persons and entities, that participate in a network for the purposes of electronic exchange of such information, to respect those interests through fair information practices.

**Security:** The physical, technological, and administrative safeguards used to protect individually identifiable health information.

**Technical safeguards:** The technology and the policies and procedures for its use that protect electronic individually identifiable health information and control access to it.

**Transparent:** Making information readily and publicly available.

**Use:** Is the employment, application, utilization, examination, analysis or maintenance of individually identifiable health information.